

# REPTILES OF THE SOLOMON ISLANDS

MICHAEL McCOY



WAU ECOLOGY INSTITUTE  
HANDBOOK NO. 7

**REPTILES  
OF THE  
SOLOMON ISLANDS**

**MICHAEL McCOY**

**WAU ECOLOGY INSTITUTE  
HANDBOOK NO. 7  
1980**

# **WAU ECOLOGY INSTITUTE**

**Box 77**

**Wau**

**PAPUA NEW GUINEA**

**PATRON**

**Sir Maori Kiki**

**FOUNDING SPONSOR**

**Bishop Museum, Honolulu**

**ASSOCIATE SPONSORS**

**PNG University of Technology  
Smithsonian Institution**

**University of Papua New Guinea**

**BOARD OF MANAGEMENT**

**Omas Genora, Chairman**

**Camilus Narokobi, B.L., Deputy Chairman**

**Peri Anton**

**Prof. E. Balasubramaniam, PhD**

**Michael Galore**

**Oscar Mamalai**

**Mambu Kizebu**

**Ninga Yamul**

**Hon. Timothy Pohai**

**F.J. Radovsky, PhD**

**Rikani Hapiago**

**M.H. Robinson, PhD**

**Utula Samana**

**Yanduk**

**SCIENTIFIC ADVISORY COMMITTEE**

**John Dobunaba**

**Lance Hill, PhD**

**Robert Johns, M. Sc.**

**Sirini Gauga**

**DIRECTOR:**

**J. Linsley Gressitt, PhD**

**DEPUTY DIRECTOR:**

**Harry Sakulas, B.Sc.**

**ASSISTANT DIRECTOR:**

**Allen Allison, PhD**

**Printed in Hong Kong  
by Sheck Wah Tong Printing Press Limited  
December 1980**

# CONTENTS

|  |    |
|--|----|
| Acknowledgments                            | iv |
| Illustrations                              | v  |
| Introduction                               | 1  |
| Class Reptilia                             | 5  |
| Turtles, Order Chelonia                    | 6  |
| Family Cheloniidae                         | 7  |
| Family Dermochelyidae                      | 10 |
| Crocodyles, Order Crocodylia               | 11 |
| Family Crocodylidae                        | 11 |
| Lizards, Order Squamata, Suborder Sauria   | 13 |
| Family Agamidae                            | 13 |
| Family Gekkonidae                          | 15 |
| Family Scincidae                           | 27 |
| Family Varanidae                           | 52 |
| Snakes, Order Squamata, Suborder Serpentes | 53 |
| Family Typhlopidae                         | 56 |
| Family Boidae                              | 58 |
| Family Acrochordidae                       | 61 |
| Family Colubridae                          | 62 |
| Family Elapidae                            | 64 |
| Family Hydrophiidae                        | 66 |
| Glossary                                   | 72 |
| Literature Cited and References            | 75 |
| Appendix                                   | 78 |
| Index of Genera and Species                | 79 |

**For Jason and the agamids of Malaupaina  
In memory of those halcyon days**

**ACKNOWLEDGMENTS**

I would like to thank my wife, Maria, and my son, Jason, for their help and encouragement with collection and photography of reptile specimens. I am also grateful to the many Solomon Islanders who have collected reptiles for me over the years. In particular I thank Peter Beata, Aidan Bu'uga and Gabriel Feroa.

For much information on Solomon Islands reptiles I am grateful to the following people; Walter C. Brown, Harold Cogger, Allen E. Greer, Samuel McDowell, Fred Parker and Richard Zweifel. Drs Cogger and Greer read through an earlier draft of this work and offered many helpful criticisms and suggestions.

To Jim Tobin, I am indebted for his very generous financial support which made publication of this book possible.

---

WAU ECOLOGY INSTITUTE is very grateful to the Beaver Heat Treating Corporation of Portland, Oregon for kindly donating funds toward the publication of this handbook.

# ILLUSTRATIONS

## Plates

1. (a) *Chelonia mydas*  
(c) *Lepidochelys olivacea*  
(e) *Gonocephalus godeffroyi* (♂)  
(g) *Cyrtodactylus louisianensis*
2. (a) *Cyrtodactylus biordinis*  
(c) *Gehyra oceanica*  
(e) *Hemidactylus frenatus*  
(g) *Lepidodactylus lugubris*
3. (a) *Corucia zebrata*  
(c) *Emoia caeruleocauda* (♂)  
(e) *Emoia cyanogaster*  
(g) *Emoia flavigularis*
4. (a) *Emoia maculata*  
(superspecies complex)  
(d) ditto  
(e) *Emoia nigra*  
(g) *Emoia nigra*
5. (a) *Lepidochelys olivacea*
6. (a) *Gonocephalus godeffroyi* (♀)  
(c) *Gehyra mutilata*
7. (a) *Gekko vittatus*  
(c) *Lepidodactylus guppyi*
8. (a) *Corucia zebrata*
9. (a) *Emoia cyanogaster*  
(c) *Emoia maculata* (complex)
10. (a) *Emoia maculata*  
(superspecies complex)
11. (a) *Eugongylus albofasciolatus*  
(c) *Lamprolepis smaragdina*
12. (a) *Lipinia noctua*  
(c) *Sphenomorphus concinnatus*
13. (a) *Tribolonotus schmidti*  
(c) *Typhlina bramina*
- (b) *Eretmochelys imbricata*  
(d) *Crocodylus porosus*  
(f) *Gonocephalus godeffroyi* (♀)  
(h) *Cyrtodactylus pelagicus*
- (b) *Gehyra mutilata*  
(d) *Gekko vittatus*  
(f) *Lepidodactylus guppyi*  
(h) *Lepidodactylus woodfordi*
- (b) *Emoia atrocostata*  
(d) *Emoia caeruleocauda* (♀)  
(f) *Emoia cyanura*  
(h) *Emoia maculata* (complex)
- (b) ditto  
(c) *Emoia maculata*  
(superspecies complex)  
(f) *Emoia nigra*  
(h) *Emoia nigra* (juv.)
- (b) *Gonocephalus godeffroyi* (♂)
- (b) *Cyrtodactylus biordinis*
- (b) *Gekko vittatus*  
(d) *Lepidodactylus lugubris*
- (b) *Emoia caeruleocauda* (♂)
- (b) *Emoia cyanura*  
(d) *Emoia maculata* (complex)
- (b) *Emoia nigra*  
(c) *Emoia nigra*
- (b) *Eugongylus rufescens*
- (b) *Prasinohaema virens*  
(d) *Tribolonotus blanchardi*
- (b) *Varanus indicus*  
(d) *Typhlina flaviventer*

14. (a) *Candoia bibroni* (b) *Candoia carinata*
15. (a) *Acrochordus granulatus* (b) *Loveridgelaps elapoides*  
(c) *Salomonelaps par*
16. (a) *Laticauda crockeri* (b) *Laticauda crockeri*  
(c) *Laticauda laticaudata*
17. (a) *Eugongylus albofasciolatus* (b) *Eugongylus rufescens*  
(c) *Geomyersia glabra* (d) *Lamprolepis smaragdina*  
(e) *Lipinia noctua* (f) *Prasinohaema virens*  
(g) *Sphenomorphus bignelli* (h) *Sphenomorphus concinnatus*
18. (a) *Sphenomorphus cranei* (b) *Sphenomorphus solomonis*  
(c) *Sphenomorphus undulatus* (d) *Sphenomorphus woodfordi*  
(e) *Tribolonotus blanchardi* (f) *Tribolonotus schmidti*  
(g) *Varanus indicus* (h) *Varanus indicus* (juv.)
19. (a) *Typhlina angusticeps* (b) *Typhlina bramina*  
(c) *Typhlina flaviventer* (d) *Typhlina subocularis*  
(e) *Typhlina willeyi* (f) *Candoia bibroni*  
(g) *Candoia carinata* (h) *Candoia carinata*
20. (a) *Acrochordus granulatus* (b) *Boiga irregularis*  
(c) *Dendrelaphis calligaster* (d) *Loveridgelaps elapoides*  
(e) *Salomonelaps par* (f) *Laticauda colubrina*  
(g) *Laticauda crockeri* (h) *Laticauda laticaudata*

## Text-figures

|   |    |
|---|----|
| 1. Map of the Solomon Islands                                 | 2  |
| 2. Plates of the shell of a cheloniid turtle                  | 6  |
| 3. Heads of cheloniid turtles showing position of prefrontals | 7  |
| 3A. Foot and digits of gekkonid lizards                       | 16 |
| 4. Head scalation of a scincid lizard                         | 28 |
| 5. Dorsolateral aspect of the head of a colubrid snake        | 54 |
| 6. Scalation in the region of the vent of a snake             | 54 |
| 7. Methods of counting scale rows                             | 55 |
| 8. Head of a typhlopoid snake                                 | 55 |

## INTRODUCTION

The Solomon Islands lie between the latitudes of 5° and 12° south and the longitudes of 154° and 162° east. The group is made up of the major islands of Bougainville, Choiseul, New Georgia, Isabel, Guadalcanal, Malaita and San Cristobal and numerous smaller islands and atolls (see Fig. 1).

Basically the larger islands are alike in that they have a central mountainous spine falling away through a series of foothills to the coast. Rainfall is high throughout the group with the annual average around 3000 to 4000mm. Rivers and creeks are numerous on all of the larger islands and many of the smaller ones. The main islands are quite rugged and covered with dense tropical rainforest. The vegetation on the smaller islands is usually thick scrub with the inevitable scattering of the ubiquitous coconut palm coastally. Both large and small islands are fringed with extensive mangrove growth in many areas. Bougainville, the largest island of the group, has active volcanoes. Guadalcanal is unique with its extensive grass plains on its northern coast.

Distances between islands vary; Rennell is separated from Guadalcanal by about 200km of open sea, while Maramasike (Small Malaita) is separated from Malaita by as little as 300–400m. Generally though, the main islands are separated by an average of around 50–80km.

Although the climate is tropical, temperatures are usually within the range of 22–34° on an annual basis as a result of the cooling winds off the surrounding sea. From May to October the SE tradewinds blow, gusting at times up to 30 knots or more. During this time the days are mostly fine with only the occasional rain squall. From November to April the wind is from the NW. This is the monsoon period and is characterised by frequent heavy rain and varying wind intensity. Cyclones occasionally develop during this time of year.

Although the Solomons are comparatively recent, dating from Miocene times, they contain an abundant vertebrate fauna. Considering the size of their land mass (about 25,000 km<sup>2</sup>), they are herpetologically rich with over 70 species of reptiles. Zoogeographically they are towards the end of a migratory path leading down from SE Asia, through New Guinea and along the Bismarcks – Solomons archipelago.

Endemism is relatively low in the reptile fauna; about 2/3 of the reptile species occur elsewhere in the New Guinea-SW Pacific region.

The following work takes into account over 70 species of reptiles. This represents all the described species known to occur on these islands at this time. It must be stressed however, that this number should not be regarded as complete. Most of the islands, particularly the montane and inland areas of the larger islands have been poorly collected and no doubt new species are still to be found.

The purposes of this work are to acquaint people with the variety of reptiles found in these islands and, for people living in the Solomons, to



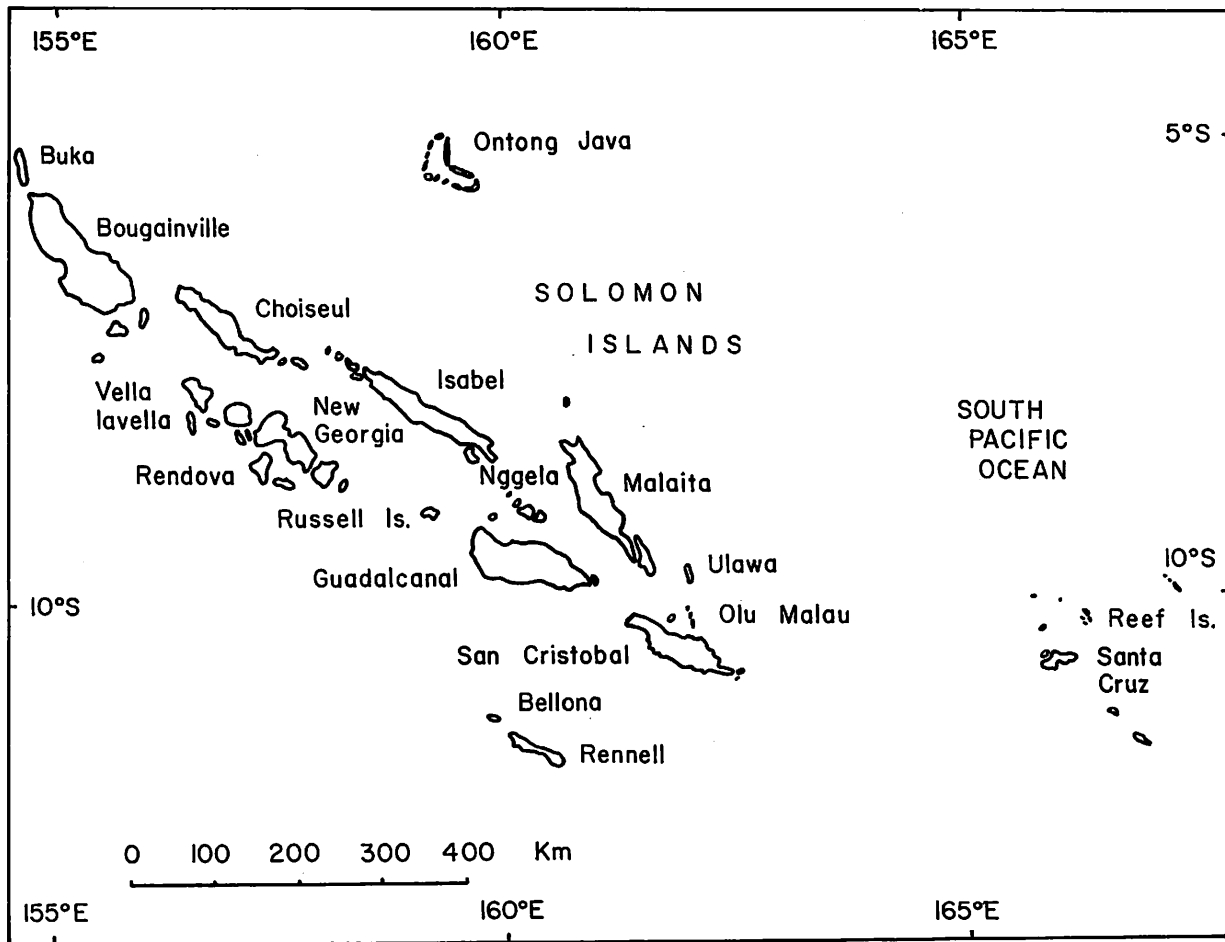


Fig. 1. Map of the Solomon Islands. The political boundary, SE of Bougainville, is not shown.

aid identification of these species. To this latter end, keys are provided to families, genera and species. I also hope that this book will be used by professional people working with preserved Solomon Islands reptile specimens in museums as an aid to identification of reptile taxa from these islands.

Virtually all available written material dealing with the herpetofauna of the Solomons is scattered widely in various museum and university publications. By compiling and condensing much of this information here, I hope to have made things a little easier for the field and museum worker.

To identify a reptile specimen using this book, it is recommended that the keys to families, genera and species be used. In this way a rapid and positive identification can usually be made. For some reptile specimens however, particularly very small reptiles, a powerful hand lens or microscope may be necessary to determine certain characters such as scale counts and number of lamellae etc. When a specimen is identified from the keys it should then be checked against the illustration (if that species is illustrated) and that species description for further confirmation of correct identification. If a reptile cannot be identified from this book it should be carefully preserved and forwarded to the herpetology department of a major natural history museum such as the Australian Museum or the American Museum of Natural History. Methods of preserving reptiles are described in the Appendix.

Each species account is divided as follows.

1. The name of the species and the original author(s). Where the author's name appears in parentheses it indicates that subsequent revision has resulted in a change of genus. With the exception of the turtles, which are widely known by their common names, only the zoological names are given for each species. The reason for this is that for nearly all of these reptiles, no common English name has ever been used. To apply them now, they would of necessity be contrived and largely meaningless. Local names are not given because of the many different dialects spoken in these islands and also because local languages often use the same name for several species and this could lead to some confusion.

2. The distribution. The ranges of species outside the Solomons are given to indicate the extent of their distribution only and should not be regarded as exhaustive. Within the Solomons, the islands listed for each species represent only those localities where that species has been collected in the past and noted accordingly in a publication or where I have personally collected that species. It is important to realise that many species will occur on islands not listed for that species; this further reflects the inadequate state of herpetological collections in the Solomons at the present time. It should also be noted here that the terms "Solomon Is." or "Solomons" as used within the context of this book refer to an island archipelago and not to a specific country. The Santa Cruz group and nearby islands are also included in this work. While these islands are not, strictly speaking, geographically part of the Solomons, they are politically

part of the country known as Solomon Islands and I have chosen to include them in this book.

3. A description of body form, scalation and scale counts. Because this aspect of each species is of interest mainly to the professional herpetologist, only the primary features of scalation are considered here. This is not to say that the layman is precluded from referring to this section; on the contrary, many species can only be positively identified by checking scale counts and scalation. Those not familiar with the terms used should consult the glossary or the line drawings of reptilian scalation. The average size given for each species does not represent a statistical mean; it is an approximation of the average adult size. The scale and lamellae counts represent only the recorded minimum and maximum counts and should not be regarded as absolutes. Most descriptions are based on Solomons reptiles that I have collected myself or are stored in the preserved collections of various museums, particularly the Australian Museum.

4. The color and pattern of different species are given as aid to identification, as is some idea of the variability of these features. Because the color and pattern are given in broad terms only, a certain flexibility must be allowed if an individual does not strictly conform to the color and/or pattern in the species account. Also it should be remembered that variation in color and/or pattern often occurs in the same species from different islands.

5. Ecological remarks. In this section a brief account is given (where known) of the species' preferred habitat, behavior, food, feeding habits and reproduction. Almost all of these accounts are based on my own observations. In the past, most publications dealing with the reptiles of the Solomons have not included notes on the live animal. It is hoped that their inclusion here will give some insight into this aspect of their biology. The environment in the Solomons is relatively undisturbed and the effects of human activity on most reptiles is slight. Some snakes and lizards adapt to living in human habitations. Many small skinks live in cleared garden areas where they benefit from the ample sunlight and insect food available. Turtles and their eggs are eaten by Solomon Islanders, particularly the Green and Hawksbill. In some areas the skink *Corucia zebrata* and the monitor lizard *Varanus indicus* are also eaten. In recent years the shooting of crocodiles for their skins has led to a sharp decline in their numbers in many parts of the Solomons.

Because the Solomons are a developing group of islands, pressure will inevitably be put on the environment in one form or another. Ideally protection should be afforded to all reptiles and other forms of wildlife at this early stage.

Reptiles are only a part of a much broader environment. To interfere with their position in the ecosystem can have far-reaching and drastic consequences, not only to the reptiles themselves, but also to other classes of animals within the same ecosystem. It is only through awareness of the

animal as part of a much broader ecosystem that we can begin to appreciate the beauty of its existence.

The greatest threat to any wild species is usually the destruction or alteration of its habitat to the extent that it cannot continue to exist in such unaccustomed surroundings. The conservation of the environment should therefore be the concern of any far-sighted and responsible government. Exploitation of the environment for short-term economic gains is not only morally wrong, it also deprives future generations of the aesthetic benefits of an undisturbed ecosystem.

In conclusion, it is hoped that this book will stimulate interest and understanding for this group of often overlooked Solomon Islands animals.

### Class Reptilia

Reptiles are a class of vertebrate animals that evolved from early amphibians and were the dominant terrestrial animals in the Mesozoic Era, about 100–200 million years ago. At the end of the Mesozoic many orders of reptiles including the giant dinosaurs became extinct.

There are about 6,000 species of living reptiles divided into four orders. The Chelonia, the turtles and tortoises; the Crocodylia, the crocodiles, alligators, caimans and gavial; the Squamata, the snakes and lizards which, although differing in appearance, are closely related and together account for over 90% of the species of living reptiles; the Rhynchocephalia, an ancient group whose single living representative is the lizard-like tuatara, *Sphenodon punctatus*, of New Zealand.

Reptiles breathe by means of lungs and unlike most amphibians do not have a gill-breathing larval stage. They are poikilothermic animals which means they have no internal mechanism for maintaining their body temperature at a constant level independent of the temperature of their environment. Most reptiles however, particularly tropical and subtropical species, are able to regulate their body temperatures to some extent by means of their activity cycles, alternating between periods spent in sunlight and shade. In temperate regions, many reptiles hibernate for the colder part of the year.

Unlike amphibians which are dependent upon water to a greater or lesser degree, reptiles evolved a scaly skin to effectively reduce loss of body water by evaporation and the laying of shelled eggs on land further reduced their dependence on water and they were thus able to successfully colonize the Earth's land surfaces. The eggs of reptiles also developed specialized membranes, the amnion, chorion and allantois which have important protective, respiratory and excretory functions for the developing embryo. In reptiles, fertilization of the egg by the sperm is internal as in birds and mammals. Male turtles and crocodiles have a single penis whereas the snakes and lizards have hemipenes; paired copulatory organs.

The male Tuatara has no intromissive copulatory organ. Many modern reptiles lay shelled eggs, in others the unshelled egg is retained in the oviducts and hatches within the body. Some advanced forms have evolved a primitive placenta with the joining of the maternal and embryonic circulation.

Today, reptiles reach their greatest diversity and abundance in tropical regions around the world. With increasing distance away from the tropics, the number of reptile species decreases although a few species of snakes and lizards occur as far north as the Arctic Circle in Europe and North America. Reptiles have successfully colonized much of the Earth, occurring in many differing environments from tropical and temperate forests to arid deserts and the tropical and subtropical seas of the world.

### TURTLES, Order *CHELONIA*

#### Key to families of Solomon Islands turtles

- Forelimbs with claws. Shell comprised of a regular series of plates (Fig. 2) . . . . . Cheloniidae
- Limbs without claws. No horny shell as such; a mosaic of small dermal bones embedded in the dermis, some of these bones are enlarged and arranged into a series of 7 longitudinal ridges. . . . . Dermochelyidae

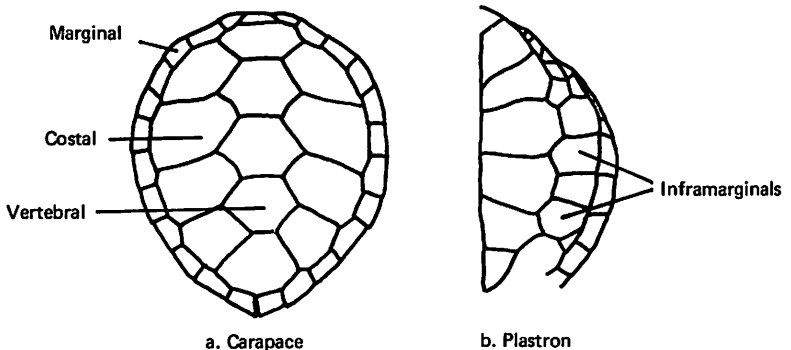


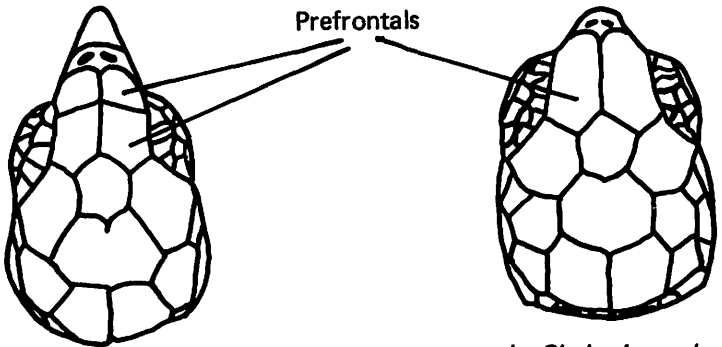
Fig. 2. Plates of the shell of a cheloniid turtle

## Family CHELONIIDAE

This family contains 6 species which represent all but one of the marine turtles. They occur throughout the tropical and subtropical seas of the world. All species are oviparous, the female coming ashore to lay her eggs in a hole scooped out in the sand well above the high water line. Their limbs are paddle-shaped as an adaptation to an aquatic existence and one or 2 claws are present on the limbs. The carapace is well developed and is comprised of a series of large dermal plates. The neck is short and the ability to retract the head into the shell is only partial. They feed on a variety of marine organisms.

### Key to Solomon Islands species of cheloniid turtles

1. Four costal plates . . . . . 2  
    Five or more costal plates . . . . . 3
2. Two pairs of prefrontals (see Fig 3). Upper jaw projecting and beak-like. . . . . *Eretmochelys imbricata*  
    A single pair of prefrontals. Upper jaw not hooked or beak-like . . . . .  
    . . . . . *Chelonia mydas*
3. Head very large. Rarely more than 5 costal plates, usually 3 inframarginals without pores . . . . . *Caretta caretta*  
    Head large. Usually 6 or more costal plates, 4 inframarginals usually with pores . . . . . *Lepidochelys olivacea*



a. *Eretmochelys imbricata*

b. *Chelonia mydas*

Fig. 3. Heads of cheloniid turtles showing position of prefrontals

## Genus *Caretta* Rafinesque

A monotypic genus. Head very large with symmetrical shields. Two pairs of prefrontals. Five costal plates.

### *Caretta caretta* (Linnaeus) Loggerhead

The Indian Ocean and Pacific Ocean form is generally referred to the subspecies *gigas*.

*Distribution:* Throughout the tropical and subtropical Indian, Pacific and Atlantic Oceans.

*Description:* Average carapace length 1.2m, reputedly growing to nearly 2m. Head very large, particularly so in adult specimens. Two pairs of prefrontals. Upper jaw not hooked. Carapace somewhat elongated and heart-shaped. Five costal plates (rarely 6), marginals usually 12–13 but may vary from 11–15, most commonly 3 inframarginals (without pores) on the bridge.

*Color:* Carapace reddish brown, often with darker variegated irregular markings. Head usually reddish brown above, paling on the sides. Limbs and tail dark brown above, fading to yellowish cream towards their edges and below. Plastron cream to yellowish.

*Ecology:* A carnivorous species, rarely seen in the Solomons; only the occasional individual has been reported although most Solomon Islanders living in coastal villages are familiar with this species. *Caretta* is known to feed in very deep water. A specimen was reportedly observed off southern California feeding on galatheid crabs at a depth of more than 300m. This species is not known to nest in the Solomons.

## Genus *Chelonia* Latreille

Head with symmetrical shields. A single pair of prefrontals. Four pairs of costal plates.

### *Chelonia mydas* (Linnaeus) Green Turtle Plate 1a

The western Pacific form is generally referred to the subspecies *japonica*.

*Distribution:* Throughout the tropical and subtropical Indian, Pacific and Atlantic Oceans.

*Description:* Average carapace length 700mm; grows to about 1m. Head moderate. Upper jaw not hooked. A single pair of prefrontals. Carapace broad and heart-shaped. Four costal plates, 5 vertebral plates, 4 inframarginals (without pores) on the bridge. Forelimbs with enlarged irregular scales distally. Limbs with a single claw.

*Color:* Carapace light brown to greenish brown with a radiating or wavy pattern of lighter and darker markings on each dermal plate. The head and limbs are light brown above, cream to white below. The plastron is cream to almost white.

**Ecology:** This turtle is relatively abundant in the Solomons and nests on most islands. The nesting season does not appear to be well defined and nesting occurs throughout the year. In the eastern Solomons I have noticed that there is perhaps more nesting activity in the period November to February. The female digs her nest ashore at night in sandy areas, usually in areas of shore vegetation well above the high water line. About 100 eggs are laid in a clutch, the female often coming ashore to the same beach to lay successive clutches over a period of several weeks. The young turtles hatch in about 8–10 weeks, always at night. "Explosive" hatching has been well documented in young turtles, where the eggs hatch almost simultaneously. Hatchling *mydas* are largely carnivorous, though the adults are thought to be almost completely herbivorous.

At night, each turtle often returns to the same place to sleep, mostly under coral overhangs at a depth of around 2–15m. While diving at night on a reef about 1km offshore from Honiara on Guadalcanal, I noticed, on several occasions over a 3 year period, 2 large turtles, a Green and a Hawksbill, sleeping in a large coral cave at a depth of about 12m. It can be reasonably assumed that these were the same turtles on each occasion. Their average foraging depth during the day more or less corresponds to the sleeping depth range though I have seen these turtles at a depth of 30m.

#### Genus *Eretmochelys* Fitzinger

A monotypic genus. Head with symmetrical shields. Two pairs of prefrontals. Four pairs of costal plates. Upper jaw with a distinct hooked beak.

#### *Eretmochelys imbricata* (Linnaeus) Hawksbill Plate 1b

The Indian Ocean and Pacific Ocean forms are generally referred to the subspecies *bissa*.

**Distribution:** Throughout the tropical and subtropical Indian, Pacific and Atlantic Oceans.

**Description:** Average carapace length about 700mm though it grows to a little over 1m. Head small to moderate. Upper jaw projecting and forming a distinct hooked beak. Two pairs of prefrontals. Carapace heart-shaped, often with a distinct vertebral keel. The edge of the carapace is serrated posteriorly and the dermal plates overlap except in hatchlings and old adults. Four pairs of costal plates, 5 vertebrales and 4 inframarginals (without pores) on the bridge. Limbs with 2 claws.

**Color:** Carapace dark brown with mottled lighter and darker patterning. The head is dark brown to black with distinct whitish sutures between the scales. The plastron is dark brown to black in hatchlings and cream to light brown, often with darker markings, in juveniles and adults.

**Ecology:** Similar to *Chelonia mydas* excepting that it is carnivorous, feeding on a variety of marine animals such as fish, crabs, various molluscs,



and certain species of sponges. Most feeding activity takes place during the early morning or late afternoon. During the main part of the day the turtle appears more to browse and rest, either on the reef or sometimes at the surface.

This species is quite common in the Solomons and nests on most islands. Nesting habits are similar to *Chelonia mydas*. Like *Chelonia*, individual Hawksbills will return to the same place to sleep each night.

### Genus *Lepidochelys* Fitzinger

Head shields symmetrical. Two pairs of prefrontals. Six or more pairs of costals. Usually 4 enlarged inframarginals on the bridge, each with a single pore.

*Lepidochelys olivacea* (Eschscholtz) Pacific or Olive Ridley Plate 1c, 5a

*Distribution:* Throughout the tropical Indian and Pacific Oceans and possibly parts of the tropical Atlantic.

*Description:* Average carapace length 750mm. Head large. The upper jaw is without a distinct hooked beak. Two pairs of prefrontals. Carapace wide and heart-shaped, flattened dorsally. Six or more pairs of costals (there may be more costals on one side than the other), 4 inframarginals on the bridge, each with a single pore at its posterior edge, 12-14 marginals. Limbs with a single claw.

*Color:* Carapace olive or grey, usually without any distinctive markings. Plastron greenish white to cream. Head and limbs olive or grey above, paling on the sides to creamy white below.

*Ecology:* This species is quite rare in the Solomons. The specimen illustrated from Wainone Bay on San Cristobal was given to me by people from that area. At that time it had a carapace length of about 300mm. They claimed that it had been raised from an egg taken from a nest in Wainone Bay the previous year. If this is correct it is the first known nesting site for this species in the Solomons. The people from Wainone Bay were unable to recall the month of the nesting but did report that the nest contained more than 30 eggs. A mating pair of this species were found in the sea off Guadalcanal in February 1976.

*Lepidochelys* is carnivorous, feeding mainly upon crustaceans and molluscs.

### Family DERMOCHELYIDAE

This family contains a single species, a highly specialized pelagic turtle. It occurs worldwide in tropical and temperate waters. The carapace lacks epidermal plates; it is made up of a series of small dermal bones embedded in the skin. The limbs, particularly the forelimbs, are very large and lack claws. The head shields are asymmetrical.

## Genus *Dermochelys* Blainville

See family for description.

*Dermochelys coriacea* (Linnaeus) Luth or Leatherback or Leathery Turtle

*Distribution:* Worldwide in tropical and temperate waters.

*Description:* Average carapace length around 1.75m though it grows to over 2m. Carapace smooth, elongated and made up, together with the plastron, of a layer of small dermal bones embedded in the skin. On the carapace a number of these bones are enlarged and arranged into a series of 7 longitudinal ridges. The plastron has 5 similar ridges. The forelimbs are particularly large and lack claws.

*Color:* Dark brown to black above with a scattering of whitish spots and blotches over the head, carapace and limbs. The undersurfaces are yellowish white.

*Ecology:* A pelagic species though occasionally entering bays and estuaries. Little of its habits in the Solomons are known as it is rarely encountered though most Solomon Islanders are familiar with it. It is known to nest on several islands of the group including Vella Lavella, Choiseul, Isabel, Guadalcanal, Malaita, Ulawa and San Cristobal. Nestings on these islands have invariably occurred on black sand beaches. The dates of nestings are irregular and somewhat infrequent though essentially year round. *Dermochelys* is known to feed largely on jellyfish. This turtle and its eggs are protected in the Solomons.

## CROCODILES, Order *CROCODILIA*

### Family CROCODYLIDAE

Crocodiles are an ancient group of reptiles. There are about 21 species distributed throughout tropical regions around the world. This family includes the "true" crocodiles, subfamily Crocodylinae, the alligators and caimans, subfamily Alligatorinae and the Indian gavial, subfamily Gavialinae. These animals differ from other reptiles in having a 4-chambered heart (the ventricle is completely divided). The ears and nostrils are valvular and together with their powerful tail, give ready testimony to their aquatic existence. They are voracious predators and have an adaptation to feeding in the water in that because of the secondary palate, the base of the tongue acts as a valve in closing off the throat while at the same time the nasal passages open behind the tongue, so that when the snout is above water they can breathe, and also they are able to hold and drown prey while submerged.

## Genus *Crocodylus* Laurenti

Snout relatively long and broad. The 4th mandibular tooth fits into a notch on the upper jaw and is more or less visible when the mouth is closed.

### *Crocodylus porosus* Schneider Plate 1d

*Distribution:* From India through SE Asia, Philippines, Timor, Caroline Is., New Guinea, N. Australia, Solomon Is., New Hebrides and Fiji. In the Solomons it occurs on most of the larger islands and many of the smaller islands of the group.

*Description:* Average total length around 2.5m although it grows to 6m. Snout fairly broad, about 2x as long as wide; 17–19 teeth on each side of the upper jaw. Usually 4 enlarged keeled nuchal scales, separated from the smooth occipital region by several rows of smaller granular scales.

*Color:* Grey or grey-brown above, often with irregular lighter and darker markings. Ventrally creamy white.

*Ecology:* This species is uncommon throughout most of the Solomons although fair numbers are present as isolated populations in areas such as Lauri Lagoon on Guadalcanal and the islands of the Olu Malau group. It inhabits mangrove areas and tidal estuaries also creeks and rivers, swamps and on occasion, the open sea. It feeds on a variety of vertebrates and invertebrates such as crabs, fish, frogs, birds, other reptiles including smaller crocodiles, mammals such as rats, flying foxes and very occasionally pigs and calves. There have been human fatalities attributed to this species in the Solomons.

I have had some opportunity to observe wild crocodiles on the island of Aliiti in the Olu Malau group. During the day they are often actively swimming but rarely leave the water. Larger individuals occasionally come ashore to sun themselves, mostly in the early morning or late afternoon; young crocodiles spend most of their time in the water and shelter in shore vegetation. At night larger crocodiles often move around on land, up to 100m or more away from the water. On Aliiti, a large colony of flying foxes *Pteropus* sp. live in the trees surrounding the pool inhabited by the crocodiles. During heavy rain the bats move low in the trees and the crocodiles wait in the water below and grab any bat that comes within reach. On Malaupaina I. in the Olu Malau group I have seen evidence of crocodiles digging in the sand above the high water line, presumably for crabs.

A large nest of leaves, sticks and grass is constructed by the female crocodile. About 60 eggs are laid and guarded by the female until they hatch. No information is available on times of nestings in the Solomons; it is not known if crocodiles have a defined nesting season in these islands.

LIZARDS, Order *SQUAMATA*: Suborder *Sauria*

Key to families of Solomon Islands lizards

1. Nuchal and dorsal crests present. Tail more than 300% of SVL . . . . . Agamidae  
Nuchal and dorsal crests absent. Tail less than 300% of SVL . . . . . 2
2. Eye covered with an immovable transparent shield. Pupil vertically elliptic. Dorsal scales very small, granular and juxtaposed . . . . . Gekkonidae  
Eye with a movable eyelid or if immovable then body scales smooth and imbricate. Pupil round . . . . . 3
3. Head scales symmetrical. Body scales imbricate, at least ventrally if not dorsally. Tail more or less round in cross section . . Scincidae  
Head scales (except the supraocular region) small and irregular. All body scales juxtaposed. Tail laterally compressed . . . Varanidae

Family AGAMIDAE

A very diverse group of lizards commonly called agamids or dragons. There are about 40 genera containing about 280 species and they occur in Africa, parts of S. Europe, much of S. and SE Asia, Australia, New Guinea and several islands of the W. Pacific. They are characterized by their asymmetrical head scalation and juxtaposed body scales which are often enlarged and spinose. The tongue is broad and fleshy. Nearly all species are oviparous and many species have femoral and preanal pores. All are essentially active, diurnal lizards and occupy a diversity of habitats from arid deserts to tropical forests and some are partly aquatic. Depending on size, they feed on a variety of vertebrates and invertebrates and many species eat some plant material in the form of blossoms and fruit.

Genus *Gonocephalus* Kaup

Mostly arboreal. Head large and angular with a distinct tympanum. A transverse gular fold is present. Dorsal and nuchal crests are present. Body strongly compressed. No femoral or preanal pores.

*Gonocephalus godeffroyi* (Peters) Plate 1e, f; 5b; 6a

*Distribution*: Caroline Is. Papua New Guinea, Australia, Solomon Is. In the Solomons: Bougainville, Shortlands, Isabel, San Cristobal, Ugi, Olu Malau, Santa Ana.

*Description*: Average SVL 120mm, tail about 450% (males) or 350% (females) of SVL. Head large and angular, slightly concave above. Canthus rostralis distinct. Body strongly compressed laterally. Adpressed hindlimb reaches the level of the snout. Head covered with small keeled scales

decreasing in size posteriorly. A single row of enlarged scales runs from the mental, along the angle of the lower jaw to below the ear where they disperse into a cluster of enlarged, slightly keeled scales. Supralabials 10–12. Tympanum distinct, equal in size to the eye. Gular region with smooth scales anteriorly, becoming keeled or spinose posteriorly. A moderate gular fold is present. A well developed (more so in males) nuchal crest is present, subcontinuous with the smaller dorsal crest. The dorsal crest continues onto the tail where it forms a slight caudal crest on the proximal 1/3 of the tail. The body scales are all strongly keeled, largest ventrally. Midbody scales in 75–110 rows. The caudal scales are larger than the body scales, all strongly keeled and slightly larger on the underside of the tail. No femoral or preanal pores.

*Color: Males:* Dorsal ground color grey-green to grey-brown. The posterior 1/3 of the body and proximal 1/3 of the tail are often a bright mauve. A series of ill-defined light transverse bars is present on the posterior 1/2 of the body and continuing onto the tail for its full length. The limbs are the same ground color as the body though they may be mottled with lighter and darker spots. The throat is cream to light or dark grey and in many individuals it is marked with yellow and orange and black spots. The ventral area is cream to yellowish without other markings. *Females:* Uniformly bright green above and yellow or yellow-green ventrally. The sides of the body may have a peppering of fine black spots. Juveniles (male and female) are bright green though the males are transversely banded with darker bars.

*Ecology:* This agamid is quite common in the eastern Solomons and uncommon elsewhere in its range in the Solomons. These lizards are almost completely arboreal though they will occasionally forage on the ground. They are very active diurnally and tend to favor the denser forest areas though they will enter cleared areas at the edge of the forest. They move rapidly through the trees by a series of leaps from branch to branch. Like many arboreal animals they will move around on a tree so that the trunk is always between themselves and an observer. Females tend to be less active than males and seem to rely more on their cryptic coloration for protection. Food consists mainly of insects, particularly ants, spiders and very occasionally smaller lizards. Small amounts of flowers and fruits are also eaten. Unlike many agamids, *godeffroyi* do not often sun themselves; they may be active in sunlit areas but they also spend long periods feeding and foraging in the shade. I have also seen them active during heavy rain. Like many agamids, male *godeffroyi* tend to be territorial, actively defending their territories from other intruding males. I have not observed courtship behavior preliminary to mating in *godeffroyi*. When mating occurs, the female is seized and held in the jaws of the male and copulation takes place immediately. Two or 3 eggs are laid in rotting timber or in moist humus on the ground and the hatchling lizards emerge in about 6–8 weeks.

## Family GEKKONIDAE

A very large and diverse family containing over 650 species which are distributed in warm areas all around the world. Typically geckos are small to moderate sized lizards with pentadactyl limbs and covered with small granular scales. The head and body are usually flattened and the tongue is broad with a slight notch at its tip. Nearly all geckos have no movable eyelids; the eye is covered with a modified transparent scale called a spectacle or brille. The pupil is vertically elliptic in most species. An external ear opening is usually present and many species have femoral and preanal pores. Their digits may be clawed or one or more digits may be clawless. Many species have modified subdigital lamellae which enable them to cling to vertical surfaces or to move upside down on the underside of branches, ceilings etc. Geckos are among the very few reptiles that have some ability to vocalize. The voluntary shedding of the tail – autotomy, is a common feature of most geckos. The regenerated tail usually differs from the original in scalation and color and sometimes also in shape. Virtually all geckos are oviparous, usually laying 2 eggs at a time. Geckos may be either terrestrial or arboreal though most species are nocturnal. They feed on insects and spiders and other small arthropods.

The colors of most geckos change from day to night. Generally the coloration during the day is quite a lot darker than at night when the lizard is active.

### Key to genera of Solomon Islands gekkonid lizards

1. Four or 5 digits clawed, digits expanded distally . . . . . 2  
    All digits strongly clawed, digits not expanded distally . . . . .  
    . . . . . *Cyrtodactylus*
2. Fifth digit moderately to well developed . . . . . 3  
    Fifth digit rudimentary . . . . . *Hemiphyllodactylus*
3. Claw arising from within the extremity of the digital expansion . . . 4  
    Claw arising from the extremity of the digital expansion. Fifth toe  
    clawless or with a minute claw . . . . . *Lepidodactylus*
4. Fifth digit without a claw. Body slender. Head large. Unregenerated  
    tail very slender with a series of annulate scales . . . . . *Gekko*  
    Fifth digit with a minute claw. Head and body moderate. Tail not  
    noticeably slender, depressed at its base . . . . . 5
5. Digits moderately dilated, 5th digit with a free terminal phalanx . . . .  
    . . . . . *Hemidactylus*  
    Digits strongly dilated, 5th digit without a free terminal phalanx . . . .  
    . . . . . *Gehyra*

### Genus *Cyrtodactylus* Gray

Digits compressed, thin, strongly clawed. Claw between 2 scales. Enlarged postmental scales present. Femoral and preanal pores present in males.

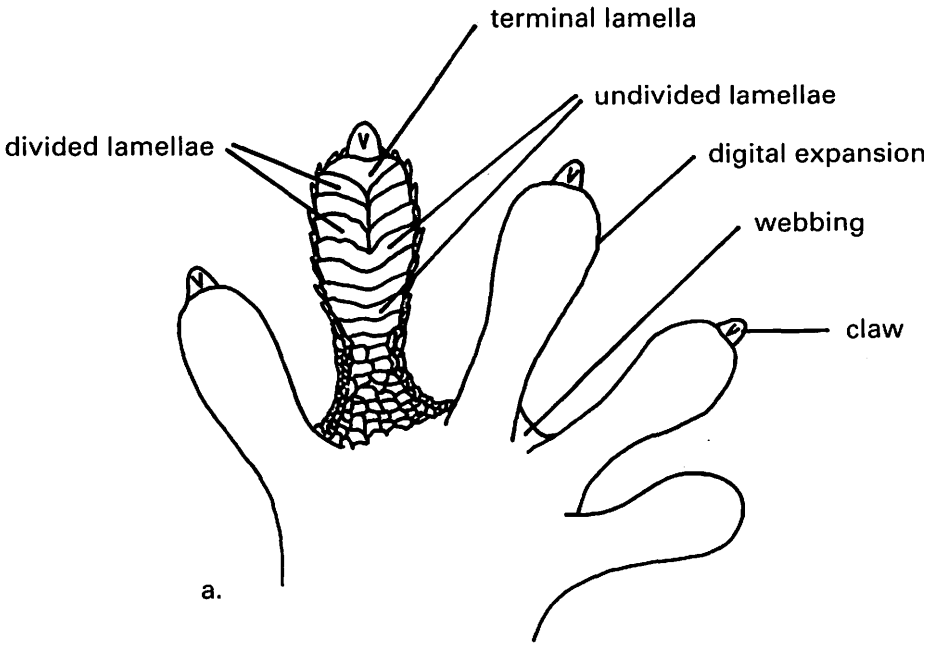


Fig. 3A, a. Underside of gekkonid foot

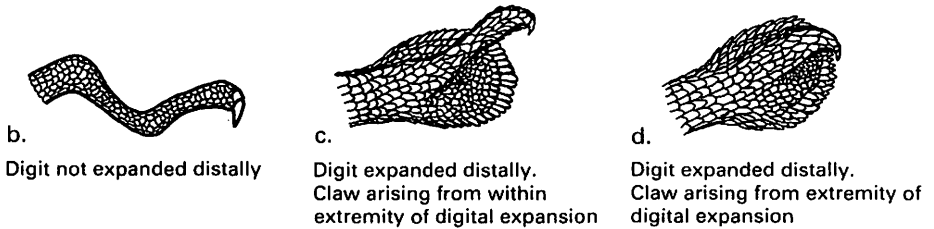


Fig. 3A, b-d. Digits of several gekkonid lizards

**Key to Solomon Islands species of *Cyrtodactylus***

1. Average SVL more than 80mm. Distinct lateral fold present . . . . . 2  
Average SVL 65mm. Lateral fold absent . . . . . *pelagicus*
2. Large size (average SVL 130mm). Underside of tail with transversely enlarged scales . . . . . *lousiadensis*  
Moderate size (average SVL 90mm). Underside of tail without enlarged scales . . . . . *biordinis*

***Cyrtodactylus lousiadensis* (De Vis) Plate 1g**

*Distribution:* Papua New Guinea and adjacent archipelagos, Cape York in Australia, Solomon Is. In the Solomons: Bougainville, New Georgia and Guadalcanal. It probably occurs on other large islands of the group.

*Description:* Average SVL 130mm, tail about 120% of SVL. Head large, wedge-shaped, slightly depressed and covered with very small conical scales with larger granules present on the supraocular and occipital regions. Rostral quadrangular, a little wider than deep with a short median groove posteriorly. Mental as wide as rostral, followed by a pair of smaller postmentals. Nostril bordered by the rostral, 1st labial, a large anterior circumnasal and 3-4 small posterior circumnasals which are often indistinguishable from the surrounding scales. Dorsally covered with very small conical granules with a regular series of enlarged conical scales. Ventrally with smooth imbricate scales. A strong lateral fold is present. Tail round in cross section, slightly flattened at its base with transversely enlarged scales on its underside. Males with 40-70 femoral and preanal pores. All digits slender, slightly compressed distally and strongly clawed.

*Color:* Dorsally light yellowish brown with several broad darker crossbands which are edged with white. A similar V-shaped darker band runs from eye to eye across the occiput. Tail banded with dark brown and white. At night when the gecko is active, the distal 1/3 to 1/2 of the tail is white. Ventrally grey to yellowish white.

*Ecology:* This large gecko is arboreal and prefers the larger forest trees where it shelters in hollows or under loose bark during the day. At night it is an active predator on insects, spiders and smaller geckos. The hollows in the strangler fig tree *Ficus* sp. are a favorite habitat of *lousiadensis*. This gecko is rarely seen and little is known of its habits.

***Cyrtodactylus pelagicus* (Girard) Plate 1h**

*Distribution:* Marshall Islands, New Guinea and adjacent archipelagos, N. Australia, Solomon Is., New Hebrides, New Caledonia, Fiji, Tonga. In the Solomons: Bougainville, Choiseul, Isabel, Guadalcanal, Nggeia, Malaita, San Cristobal, Olu Malau, Rennell, Shortlands.

*Description:* Average SVL 65mm, tail about 100% of SVL. Head large, slightly depressed, covered with small conical scales. Rostral with a median groove. Nostril bordered by rostral, 1st labial, a single large anterior circumnasal and 3-4 small posterior circumnasals that are often indistinguishable from surrounding scales. Dorsally covered with small conical



scales with a series of enlarged conical tubercles forming regular rows of 12 or more at midbody. Tail slender, evenly tapered, round in cross section, covered with small, slightly spinose scales. Males with 8 to 12 preanal pores. Digits long, slender, strongly clawed.

*Color:* Dorsally grey-brown with irregular darker wavy transverse bands edged posteriorly with white, this banding continued onto the tail. Ventrally grey to almost white. The lips are usually barred with white. At night when the gecko is active, the dorsal pattern is often obscure and the whole body is light grey in color.

*Ecology:* A very common terrestrial gecko. In forest areas it shelters diurnally under rotting fallen timber and amongst rocks and in crevices in the root systems of large trees. It is also a common inhabitant of piles of coconut husks in plantations. Active and agile at night, it often moves in a series of short leaps. Although it forages mainly on the ground, it also climbs a little distance up the trunks of trees at night in search of its insect food. It lays its 2 eggs in and under ground debris or in hollows in the roots of trees.

**Cyrtodactylus biordinis** Brown & McCoy Plate 2a, 6b

*Distribution:* Guadalcanal.

*Description:* Average SVL 90mm, tail about 100% of SVL. Head large, slightly depressed, covered with small conical scales. Rostral with a slight median groove. Nostril bordered by the rostral, 1st labial, a single large anterior circumnasal and 2-3 small posterior circumnasals which are often indistinguishable from the surrounding scales. Dorsally covered with very small conical scales with a series of enlarged conical granules forming more or less regular longitudinal rows. A distinct lateral fold is present. Tail slender, round in cross section, covered with subimbricate scales, no transversely enlarged scales present on its underside. Males with a double parallel row of femoral pores, usually separated from the single preanal pore series, 60 or more pores in the femoral and preanal series (not counting each pore in the doubled femoral series). Digits slender, compressed distally, strongly clawed.

*Color:* Dorsal ground color light brown or grey-brown. A thick black line runs from the eye, along the neck in a dorsolateral position, usually joining the line on the opposite side of the body at a point slightly posterior to the forelimbs. A single large dark spot is present on the nape of the neck, 1-4 smaller spots are usually present on the occiput. Two-3 broad, uneven margined dark bands are present dorsally, these bands edged posteriorly with white. Tail banded black and white for proximal 1/3 of its length and black for distal portion except for tip which is grey during the day and white at night when the gecko is active. Ventrally grey to grey-white.

*Ecology:* This fairly common gecko is rarely seen during the day when it shelters in hollows in trees in forest areas. At night it forages for its insect food on small trees and creepers up to 5m above the ground; it does



A

B



C

D



E

F



G

H

Plate 1

- a. *Chelonia mydas*  
Malaupaina, Olu Malau
- c. *Lepidochelys olivacea*  
Wainone Bay, San Cristobal
- e. *Gonocephalus godeffroyi* (♂)  
Malaupaina, Olu Malau
- g. *Cyrtodactylus louisianensis*  
Mt Austen, Guadalcanal

- b. *Eretmochelys imbricata*  
Malaupaina, Olu Malau
- d. *Crocodylus porosus*  
Malaulalo, Olu Malau
- f. *Gonocephalus godeffroyi* (♀)  
Malaupaina, Olu Malau
- h. *Cyrtodactylus pelagicus*  
Mt Austen, Guadalcanal



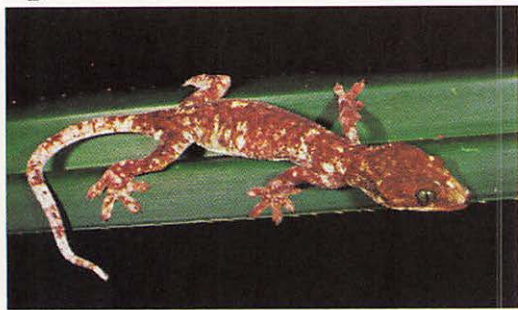
A



B



C



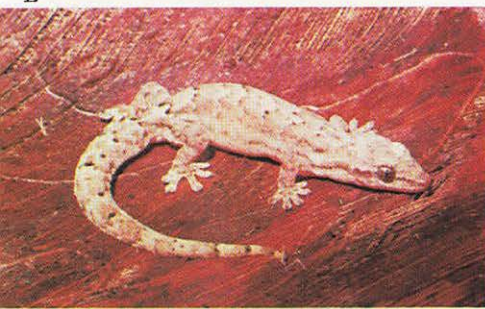
D



E



F



G



H

Plate 2

- a. *Cyrtodactylus biordinis*  
Mt Austen, Guadalcanal
- c. *Gehyra oceanica*  
Marau, Guadalcanal
- e. *Hemidactylus frenatus*  
Honiara, Guadalcanal
- g. *Lepidodactylus lugubris*  
Malaupaina, Olu Malau

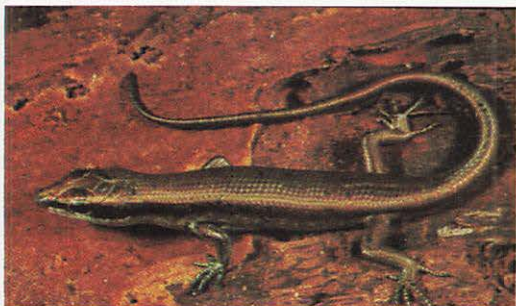
- b. *Gehyra mutilata*  
Marau, Guadalcanal
- d. *Gekko vittatus*  
Malaupaina, Olu Malau
- f. *Lepidodactylus guppyi*  
Malaupaina, Olu Malau
- h. *Lepidodactylus woodfordi*  
Korovou, Shortlands



A



B



C



D



E



F



G



H

Plate 3

- |                                   |   |
|-----------------------------------|---|
| a. <i>Corucia zebra</i>           | b. <i>Emoia atrocostata</i>             |
| Mt Austen, Guadalcanal            | Honiara, Guadalcanal                    |
| c. <i>Emoia caeruleocauda</i> (♂) | d. <i>Emoia caeruleocauda</i> (♀)       |
| Kira Kira, San Cristobal          | Kira Kira, San Cristobal                |
| e. <i>Emoia cyanogaster</i>       | f. <i>Emoia cyanura</i>                 |
| Kira Kira, San Cristobal          | Honiara, Guadalcanal                    |
| g. <i>Emoia flavigularis</i>      | h. <i>Emoia maculata</i> (superspecies) |
| Boromole, Nggela                  | Ringi Cove, Kolombangara                |



A



B



C



D



E



F



G



H

Plate 4

- a. *Emoia maculata* (superspecies)  
Honiara, Guadalcanal
- c. *Emoia maculata* (superspecies)  
Kira Kira, San Cristobal
- e. *Emoia nigra*  
Honiara, Guadalcanal
- g. *Emoia nigra*  
Boromole, Nggela

- b. *Emoia maculata* (superspecies)  
Arabala, Malaita
- d. *Emoia maculata* (superspecies)  
Malaupaina, Olu Malau
- f. *Emoia nigra*  
Honiara, Guadalcanal
- h. *Emoia nigra* (juvenile)  
Honiara, Guadalcanal

not appear to inhabit the larger bare-trunked trees to any extent. When moving, it often holds its tail arched above its back. Its 2 eggs are laid in tree hollows or possibly in ground debris at the bases of trees. It appears to be completely arboreal in its habits.

### Genus *Gehyra* Gray

Digits strongly dilated with undivided or medially divided subdigital lamellae. All digits clawed (the 5th digit with a minute claw). The claw (not the minute 5th claw) arises from within the extremity of the digital expansion. Inner digits without free terminal phalanges. Femoral and preanal pores present in males.

#### Key to Solomon Islands species of *Gehyra*

Subdigital lamellae undivided . . . . . *oceanica*  
Subdigital lamellae mostly divided . . . . . *mutilata*

#### *Gehyra mutilata* (Wiegmann) Plate 2b, 6c

*Distribution:* Madagascar, Ceylon, SE Asia, Japan, Philippines, New Guinea, much of Oceania, Mexico. In Solomons: Guadalcanal, San Cristobal, Santa Cruz.

*Description:* Average SVL 55mm, tail about 100% of SVL. Head moderate, slightly depressed, covered with small conical granules. Body with a slight lateral fold. Rostral quadrangular, wider than deep. Mental pentagonal, followed by a pair of much larger postmentals and several pairs of enlarged chinshields. Nostril bordered by the rostral, 1st labial, a single large anterior circumnasal and usually 2 smaller posterior circumnasals. Dorsally body covered with smooth conical scales which increase in size laterally. Tail quite depressed and fairly wide at its base though often a little constricted at its point of attachment to the body, covered with slightly spinose scales above, giving tail a noticeably serrate edge. Under-side of the tail with large transverse scales. Ventrally covered with smooth imbricate scales. Digits webbed at their bases and strongly dilated with 8-10 lamellae under the median toes, the terminal lamellae are undivided, most of the rest are divided. Males with 32-39 femoral and preanal pores (Brown & Alcalá 1978).

*Color:* Head and dorsum grey to light brown with a peppering of lighter and darker spots and blotches. At night when the gecko is active, the color is almost completely a pale, pinkish white. Ventrally light yellow or cream.

*Ecology:* An arboreal gecko often found in human habitations. During the day it shelters in tree hollows or under loose bark or in the ceilings of houses. At Kira Kira on San Cristobal it is a fairly common house gecko, feeding on insects that gather around house lights at night, thereby utilizing the niche occupied by *Hemidactylus frenatus* in other towns in

the Solomons; *H. frenatus* does not occur on San Cristobal. On Guadalcanal *mutilata* appears to be restricted to the Marau area at the eastern tip of the island. In houses in Marau it occurs in equal numbers with *Hemidactylus frenatus* and also occasional specimens of *Gehyra oceanica* and *Lepidodactylus lugubris*. These 4 species appear to co-exist amicably. The only other record of this gecko in the Solomons is of 2 specimens collected at Santa Cruz in 1973 and now in the Australian Museum. Earlier literature does not list this species as occurring in the Solomons; it is probably a recent introduction from elsewhere in the Pacific, having been brought in by shipping as eggs or mature lizards.

The specific name of *mutilata* refers to this gecko's tendency to shed large portions of skin if it is grasped even lightly; presumably this is a means of avoiding predation analogous to the tail shedding of many skinks and geckos; pieces of skin lost are soon regrown by the gecko.

### *Gehyra oceanica* (Lesson) Plate 2c

*Distribution:* Indo-Australian archipelago, New Guinea, N. Australia, much of Oceania. In Solomons: Bougainville, Mono, Isabel, Guadalcanal, Nggela, Ontong Java, San Cristobal, Ugi, Olu Malau, Bellona, Santa Cruz, Reef Is.

*Description:* Average SVL 90mm, tail about 100% of SVL. Head moderate, slightly depressed. Body stout with an indistinct lateral fold. Hindlimbs with a distinct fold along their posterior edges. Nostril bordered by rostral, 1st labial, a single anterior circumnasal and 3-4 smaller posterior circumnasals. Triangular mental followed by a row of smaller postmentals. Dorsally covered with small smooth conical scales. Ventrally with smooth imbricate scales. The tail is covered with smooth subimbricate scales, largest on its underside. All digits clawed, the 5th digit with a minute claw. Claws (except 5th claw) arise from within the extremity of the digital expansion. Fifth digit without a free terminal phalanx. Digits all strongly dilated with an undivided series of 11-18 lamellae under the median toes. Males with 26-42 femoral and preanal pores.

*Color:* Ground color light or dark brown with irregular lighter and darker flecking over the dorsum, limbs and tail. The color fades at night to a pale creamy white with few distinct markings. Ventrally cream to yellow. The underside of the tail is often bright yellow or orange.

*Ecology:* A common arboreal species, sometimes found in human habitations. In forest areas it is often found on the larger trees, resting in an exposed position on the trunk during the day, relying on its cryptic coloration for protection. It is also a common inhabitant of the crowns of coconut and sago palms. It feeds on insects and spiders and occasionally on smaller geckos. It lays its 2 eggs under loose bark, in tree hollows or in the ceilings of houses. Like *mutilata*, *oceanica* will shed pieces of its skin if it is grasped.

## Genus Gekko Laurenti

Digits strongly dilated with a series of undivided subdigital lamellae. All digits except the 5th, clawed. Claws arise from within the extremity of the digital expansion. Femoral and preanal pores present in males.

*Gekko vittatus* Houttyn Plate 2d, 7a, 7b

*Distribution:* Indo-Australian archipelago, New Guinea, Solomon Is. In the Solomons: Bougainville, Mono, New Georgia, Guadalcanal, Nggela, San Cristobal, Ugi, Olu Malau, Santa Ana, Rennell, Bellona, Santa Cruz.

*Description:* Average SVL 140mm, tail about 120% of SVL. Head very large, distinctly depressed. Body elongate with a lateral fold. Limbs well developed, slender. Tail round in cross section, prehensile, slender, with a series of annulate scales. Rostral quadrangular, wider than deep. Nostril bordered by the rostral, 1st labial, a single large anterior circumnasal and 2-3 smaller posterior circumnasals. Triangular mental followed by numerous slightly enlarged scales. Head and dorsum covered with small, smooth conical scales. A regular series of enlarged conical tubercles is present on the occipital region of the head, dorsum and limbs. Ventrally with smooth imbricate scales. Digits strongly dilated, 5th digit clawless, claws arising from within the extremity of the digital expansion. 18-20 lamellae in an undivided series under the median toes. Males with 14-58 femoral and preanal pores (De Rooij 1915).

*Color:* Ground color variable, usually light or dark brown or grey. A narrow white vertebral stripe is present in many specimens, running from the base of the tail and onto the neck where it forks, each branch fading out on the occipital region. This vertebral stripe may be absent or indistinct in some adults but nearly always present in juveniles. The tail is usually marked with broad whitish bands. Ventrally white to greyish yellow.

*Ecology:* A common arboreal species. During the day this gecko often remains motionless on exposed tree trunks or along thin vines and branches, relying on its cryptic coloration for protection as does *Gehyra oceanica*, a species with which it is often found. Another favored diurnal retreat is among the dead, trailing leaves of banana and *Pandanus* trees. At night it is an active, voracious predator on smaller geckos, insects and spiders. It moves swiftly through the trees with the aid of its prehensile tail and also by leaping from branch to branch over distances of up to 1m. It is a common house gecko in parts of the eastern Solomons. It lays its 2 eggs, which adhere to each other and to the substrate on which they are laid, under loose bark or on the underside of leaves. I have observed community egg-laying in this species in *Pandanus* trees where up to 100 eggs and remains of eggs representing several generations may be present among the dead leaves of a single tree.



## Genus *Hemidactylus* Oken

Digits free or webbed, moderately dilated with a medially divided series of subdigital lamellae. All digits clawed, 5th digit with a very small claw. The claws arise from within the extremity of the digital expansion. Fifth digit with a free terminal phalanx. Femoral and preanal pores present in males.

### *Hemidactylus frenatus* Duméril & Bibron Plate 2e

*Distribution:* S. and E. Africa, Madagascar, Mauritius, Ceylon, India, S. China, Japan, Philippines, SE Asia, New Guinea, N. Australia, Oceania, Mexico, St Helena. In the Solomons: Bougainville, Gizo, Guadalcanal, Tulagi, Malaita, Shortlands.

*Description:* Average SVL 55mm, tail about 120% of SVL. Head moderate. Rostral quadrangular with a distinct median groove. Nostril bordered by the rostral, 1st labial, a single large anterior circumnasal and 2 small posterior circumnasals. Mental triangular, as wide as deep, followed by a pair of enlarged postmentals. Dorsally covered with small, smooth conical scales. There are enlarged conical granules at regular intervals along the body dorsally and laterally. Ventrally with smooth imbricate scales. Tail prehensile, flattened at its base, covered with smooth imbricate scales and a regular series of enlarged spinose scales forming annuli. The underside of the tail has enlarged transverse scales. All digits clawed, the 5th digit with a very small claw. The claws arise from within the extremity of the digital expansion. Digits moderately dilated with a series of 7-10 divided lamellae under the median toes. Males with 20-40 femoral and preanal pores.

*Color:* Grey to whitish above with a peppering of darker flecks that may form regular patterning in some specimens. These markings are only evident during the day when the gecko is at rest, at night the color is a uniform pale pinkish white, though the tail is often an orange-pink. Ventrally whitish.

*Ecology:* This species is only found in association with human habitations and not in a natural habitat wherever it occurs in the Solomons. Earlier workers invariably do not include this species in the Solomons reptile fauna, most probably indicating that it is a recent introduction from elsewhere. This likelihood becomes more probable when one considers the affinity of the gecko for dwelling in houses and laying its 2 eggs not only in the ceilings but also in building materials for example that may be shipped from island to island. It is possible that *frenatus* was introduced during World War II when large amounts of military equipment were brought into the Solomons from other Pacific countries. At this time, *frenatus* appears to be restricted to the larger towns in the Solomons. No doubt with increasing movement of people and material between the islands of the group, *frenatus* will eventually become more widespread.

In the evenings it is often abundant around house lights, feeding on the insects that are attracted to these lights. In this situation it is not unusual to see up to 20 geckos gathered around a light. Bustard (1970) has shown that in New Guinea *frenatus* greatest activity is reached in the hour following sunset and then sharply decreases until a minor increase again at dawn. This species is quite vocal; its chirping call is most distinctive.

### Genus *Hemiphyllodactylus* Bleeker

Digits dilated, without webbing. Fifth digit rudimentary, clawless, other digits with free terminal phalanges, clawed, the claws arising from within the extremity of the digital expansion. Males with femoral and preanal pores.

#### *Hemiphyllodactylus typus* Bleeker

*Distribution:* Ceylon, S. India, Philippines, SE Asia, New Guinea, Solomon Is., Oceania. Apparently introduced into Hawaii by early Polynesian voyagers (Kluge 1966). In Solomons: Bougainville, Guadalcanal.

*Description:* Average SVL 40mm, tail about 100% of SVL. Head moderate, longer than wide. Body elongated, slender. Limbs rather short. Rostral quadrangular. Nostril bordered by the rostral, 1st labial, a single large anterior circumnasal and 2 smaller posterior circumnasals. Mental triangular, followed by 1-3 rows of enlarged scales. 8-12 supralabials. Body covered with small granular scales without larger tubercles. Tail round in cross section, slender. Fifth digit rudimentary, clawless and with 4-5 undivided lamellae. Other digits clawed, the claws arising from within the extremity of the digital expansion. Fourth digit with 5-8 lamellae, usually several distal lamellae are divided. Males with 6-11 preanal pores and 8-13 femoral pores.

*Color:* Dorsally light brown to reddish brown with scattered darker flecks. A dark stripe runs from the snout, through the eye and onto the neck. A series of round lighter spots is often present dorsolaterally. Ventrally whitish speckled with brown. At night when the gecko is active, the color is a pale pinkish white.

*Ecology:* Essentially an arboreal gecko, sheltering by day in the leaf axils of ferns and palms and under the bark of trees. It occasionally lives in human habitations. Two eggs are laid, usually under the bark of trees. This species is uncommon throughout most of its range.

### Genus *Lepidodactylus* Fitzinger

Digits moderately dilated with a partially divided or an undivided series of subdigital lamellae. The claw arises from the extremity of the digital expansion. Fifth digit clawless or with a very small claw. Males with femoral and preanal pores.

**Key to Solomon Islands species of *Lepidodactylus***

1. Terminal lamellae divided . . . . . 2  
    Terminal lamellae undivided . . . . . 3
2. Tail more or less distinctly flattened with spinose scales along its edges forming a noticeable lateral fringe. Digits with at least some degree of webbing . . . . . *lugubris*  
    Tail only slightly flattened, spinose scales along its edge poorly developed and lateral fringe not particularly noticeable. Digits without webbing . . . . . *woodfordi*
3. All lamellae undivided . . . . . *mutahi*  
    Several distal lamellae (not terminal lamellae) divided . . . . . 4
4. Fifth digit clawless or with a minute claw. Supralabials 11-13. Males with 39-51 femoral and preanal pores . . . . . *guppyi*  
    Fifth digit clawless. Supralabials 10. 32 femoral and preanal pores (in the unique specimen) . . . . . *shebae*

***Lepidodactylus guppyi* Boulenger Plate 2f, 7c**

*Distribution:* New Britain, Bougainville, Fauro, Kolombangara, Isabel, Guadalcanal, Nggela, Savo, Malaita, San Cristobal, Olu Malau, Santa Cruz, Vanikoro.

*Description:* Average SVL 40mm, tail about 120% of SVL. Head small. Body slender and elongate. Tail slender, round in cross section. Rostral quadrangular, wider than deep. Nostril bordered by the rostral, 1st labial and 3-4 small cricurnasals. Supralabials 11-13. Mental followed by several rows of slightly enlarged chinshields. Head and body covered with small, smooth conical granules. Ventrally with smooth subimbricate scales. Digits moderately dilated, 5th digit clawless or with a minute claw, other digits clawed, the claw arising from the extremity of the digital expansion. Digits with a slight web at their bases. 11-13 lamellae under the 4th toe, terminal lamellae undivided, 2-4 subterminal lamellae divided. Males with 39-51 femoral and preanal pores.

*Color:* Dorsally light to dark brown with a more or less regular series of lighter broad, wavy transverse bands edged anteriorly with black, these bands continuing onto the tail. An alternating series of black and whitish spots is present in a line in a ventrolateral position between the fore and hindlimbs. The head is marked irregularly with lighter and darker blotches. There is often a dark streak on the side of the head, passing from the snout, through the eye and onto the neck. Ventrally uniformly yellowish white, or with darker speckling.

*Ecology:* An uncommon arboreal species and little is known of its ecology. Its habits are probably similar to *Lepidodactylus lugubris* excepting that it does not enter human habitations to any extent, preferring to shelter diurnally under loose bark and occasionally under ground debris. Like *lugubris* it also shelters in the leaf axils and dead trailing leaves of *Pandanus*.

**Lepidodactylus lugubris** (Duméril & Bibron) Plate 2g, 7d

*Distribution:* Ceylon, India, islands of the Indian Ocean, SE Asia, Philippines, New Guinea, Indo-Australian archipelago, N. Australia, Oceania, Mexico, C. America. In the Solomons: Bougainville, Guadalcanal, Nggela, Ontong Java, San Cristobal, Olu Malau, Shortlands. This wide ranging species probably occurs on most islands of the Solomons group.

*Description:* Average SVL 40mm, tail about 110% of SVL. Head small. Body moderate. Tail stout, depressed, particularly at its base. The scales on the edge of the tail are enlarged and spinose and form a distinct lateral fringe. Nostril bordered by the rostral, 1st labial, a single large anterior circumnasal and 2 smaller posterior circumnasals. Mental followed by several rows of enlarged chinshields. Supralabials 10-12. Digits are moderately dilated, the 5th digit with a minute claw. The claws arise from the extremity of the digital expansion. 11-15 lamellae under the 4th toe, terminal and 3 or 4 distal lamellae are divided.

*Color:* Pale fawn to grey above with a series of indistinct, often obscure, darker W-shaped markings along the center of the back and onto the tail. There is usually a dark streak running from the snout, through the eye and onto the neck. Ventrally yellow to white.

*Ecology:* A common small arboreal gecko, often found in human habitations. Its normal diurnal retreat in forest areas is under loose bark or amongst dead trailing foliage. It is also a common inhabitant of the leaf axils of *Pandanus* and coconut palms. It lays 2 eggs, which adhere to each other and to the substrate on which they are laid, under bark and leaves and also in the ceilings of houses. Community egg laying also occurs with this species as with *Gekko vittatus*. Many individuals of *lugubris* may share a single *Pandanus* for oviposition. Virtually all populations of *lugubris* consist entirely of females and reproduction is by parthenogenesis.

*Lugubris* is not an active species when compared with other members of its family; when feeding it tends to wait for its insect prey to come within reach rather than actively making pursuit for any distance. Given the opportunity, *lugubris* also feeds on food left unattended in houses, particularly sweet foods; I have seen 8 geckos gathered around an open tin of jam, eagerly licking the contents. I have also often seen them drinking the dregs in cups of sweetened tea and coffee.

**Lepidodactylus mutahi** Brown & Parker

*Distribution:* Bougainville.

*Description:* Average SVL 45mm. Body moderately depressed, slightly elongate. Tail subcylindrical. Nostril bordered by the rostral, 1st labial, a single anterior circumnasal and 2 smaller posterior circumnasals. Supralabials 10-12, infralabials 9-11. Mental triangular, followed by several rows of enlarged chinshields. Body covered with small granular scales without larger tubercles. Digits moderately dilated, slight webbing between the toes. All digits except the 5th finger and toe, clawed, the claws arising from the extremity of the digital expansion. 9-12 undivided lamellae beneath the 4th toe. Males with 27-34 femoral and preanal pores.

**Color:** Dorsally pale yellow-brown to dark red-brown, often with a light stripe running from the eye to the ear. The tail has orange patches and the whole body is often marked with darker blotches or bars.

**Ecology:** Brown & Parker (1977) report this species as being “. . . most abundant in *Pandanus* in permanent coastal swamps, but that it also occurs in banana trees and newly cleared garden areas.”

***Lepidodactylus shebae* (Brown & Tanner)**

**Distribution:** Known from a single specimen collected in the Lungga River area on Guadalcanal in 1944.

**Description:** (Adapted from Brown & Tanner 1949) SVL 36mm, tail 29mm. Head about 1.5x as long as broad. Body slender. Tail round in cross section, slender. Limbs well developed. Rostral more than 2x as wide as deep, with a median groove dorsally. Nostril bordered by the rostral, 1st labial and 3 circumnasals. Supralabials 10/10, infralabials 9/9. Mental pentagonal, followed by 2 rows of chinshields and 2 rows of slightly enlarged scales. The head and body are covered with small granular scales. Ventrally with larger imbricate scales. Digits long, evenly dilated with partial webbing. Fifth toe clawless. The claws on the other digits are contained in a sheath. 11 lamellae under the 4th toe, terminal lamellae undivided, 2 or 3 distal lamellae divided. 32 femoral and preanal pores.

**Color:** Reddish brown dorsally with lighter mottling laterally. A narrow broken band runs from beneath the eye and onto the neck. A series of 3 small brown blotches is present in a dorsolateral position on either side of the body from the neck to a little posterior to the forelimb. The tail has distinct transverse bands dorsally.

**Ecology:** Unknown.

***Lepidodactylus woodfordi* Boulenger Plate 2h**

**Distribution:** Philippines, New Guinea, Solomon Is. In the Solomons: Shortlands, Fauro, Guadalcanal.

**Description:** The following is Boulenger's (1887b) original description: "Closely allied to *Lepidodactylus guppyi*. Digits without distinct web. Tail a little depressed, rounded. Femoral and preanal pores 25 altogether. Grey above with zigzag black cross bands, six between the nape and base of the tail; a black streak from the nostril to the neck, passing through the eye and above the ear; lower surfaces whitish." Boulenger further gives the SVL as 40mm and the tail length as 38mm.

Boulenger erroneously allied *woodfordi* to *guppyi*, whereas in fact it is very closely related to *lugubris*, probably only differing in the degree of flattening of the tail, the presence or absence of slight webbing between the digits and by subtle differences in pattern. Whether or not these differences are indicative of speciation is debatable. Walter C. Brown (pers. comm.) expresses doubt as to the validity of *woodfordi*, reserving judgement until such time as sufficient specimens become available for comparative studies.

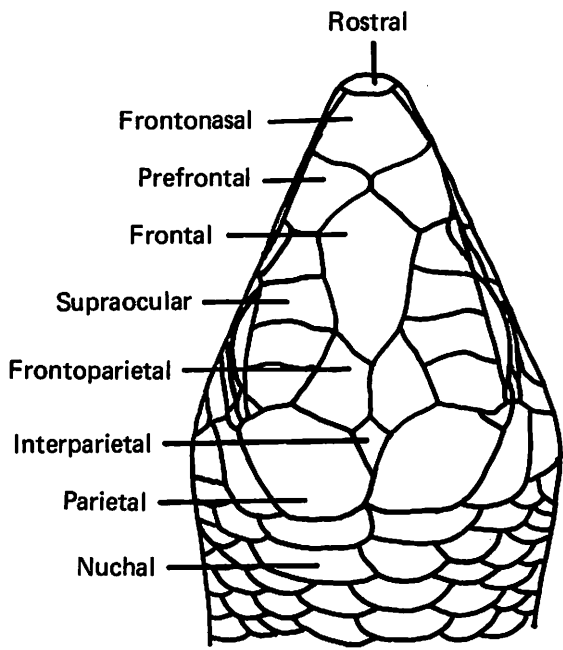
*Ecology:* Specimens that I believe to be referable to *woodfordi* in the sense of Boulenger (1887b), I have found in houses at Korovou in the Shortland Is. where they forage for small insects on the ceilings and walls at night along with typical *lugubris*.

Family SCINCIDAE

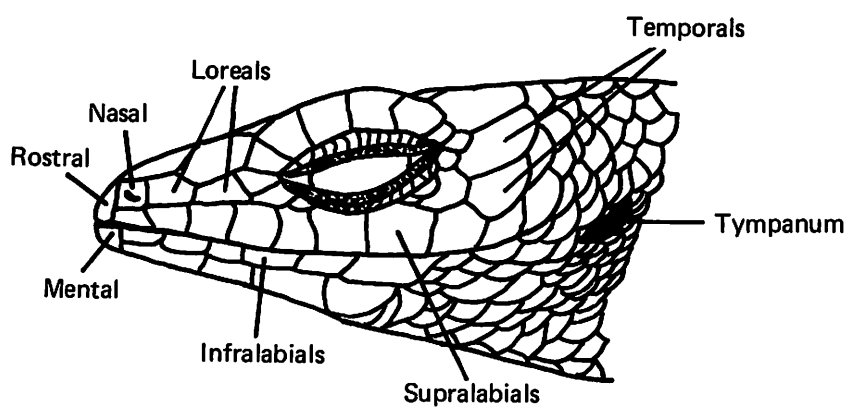
This family contains over 600 species of lizards differing greatly in size, body form and habitat. They are commonly called skinks and in the Solomons they represent the majority of lizards. Skinks occur virtually all over the world, from the large continental land masses to the far-flung islands of the Pacific. They reach their greatest diversity and abundance in the tropics. Although most species are terrestrial, many are largely arboreal and others are fossorial in their habits. Although they are mostly diurnal lizards, a number are crepuscular or nocturnal, particularly the burrowing species. In the Solomons all species have well developed limbs though some species occurring elsewhere have the limbs greatly reduced in size and function or are partially or completely limbless. The lower eyelid of skinks may be scaly or a transparent palpebral disc may be present. Other forms have an immovable transparent spectacle covering the eye similar to the geckos. Also like the geckos, many skinks have the ability to autotomise their tails, subsequently regenerating them. The head shields of skinks are more or less symmetrical and the tongue is short and broad. The smaller species feed on insects and spiders and some of the larger forms are partly or completely herbivorous. Reproduction in skinks is by egg-laying or by live birth.

Key to genera of Solomon Islands scincid lizards

- 1. Forelimbs with 5 digits . . . . . 2  
Forelimbs with 4 digits . . . . . *Carlia*
- 2. Median internuchal scale present. Prefrontals absent. Body scales smooth . . . . . *Geomyersia*  
Median internuchal scale absent (Fig. 4). Prefrontals present or if absent then body scales carinate or spinose . . . . . 3
- 3. Lower eyelid movable; scaly or with a palpebral disc . . . . . 4  
Eye covered with an immovable transparent spectacle . . . . .  
. . . . . *Cryptoblepharus*
- 4. Lower eyelid scaly . . . . . 7  
Lower eyelid with a palpebral disc . . . . . 5
- 5. Supranasals present. 30 or more lamellae under the 4th toe . . *Emoia*  
Supranasals absent. Less than 30 lamellae under the 4th toe . . . . . 6
- 6. Proximal lamellae expanded. Uniformly pale green dorsally . . . . .  
. . . . . *Prasinohaema*  
Lamellae normal. Dorsally brown with a light vertebral stripe . . . . .  
. . . . . *Lipinia*



a. Dorsal



b. Lateral

Fig. 4. Head scalation of a scincid lizard

7. Body scales smooth . . . . . 8  
Body scales carinate or spinose . . . . . *Tribolonotus*
8. Body somewhat elongate. Limbs poorly to moderately well developed. Dorsally brown with lighter and/or darker markings . . 10  
Body normal. Limbs well developed. Dorsal ground color pale green to olive green, bronze green or bright green . . . . . 9
9. Large size (average SVL 350mm). Tail slender, prehensile. Parietals widely separated . . . . . *Corucia*  
Moderate size (average SVL 90mm). Tail evenly tapered, not prehensile. Parietals in contact . . . . . *Lamprolepis*
10. Auricular lobules present. Prefrontals separated. Supranasals present . . . . . *Eugongylus*  
Auricular lobules absent. Prefrontals in contact or separated. Supranasals absent or if present then head shields partially fragmented . . . . . *Sphenomorphus*

### Genus *Carlia* Gray

Small terrestrial, diurnal lizards. Forelimbs with 4 digits, hindlimbs with 5 digits. Frontoparietals fused into a single shield. Lower eyelid with a palpebral disc. Parietals in contact. Oviparous.

#### *Carlia fusca* (Duméril & Bibron)

*Distribution:* New Guinea and adjacent archipelagos, N. Australia, New Britain, Solomon Is. In the Solomons: Bougainville and several small neighboring islands.

*Description:* Average SVL 50mm, tail about 150% of SVL. Head moderate. Body a little stout. Limbs well developed, overlapping when adpressed. Forelimbs with 4 digits, hindlimbs with 5 digits. Supranasals absent. Prefrontals usually separated. Frontal a little longer than wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals fused into a single shield. A small interparietal is present. Enlarged nuchal scales present. The ear opening has several small overlapping lobules at its anterior edge. The dorsal scales are 4-sided and very feebly carinate. Midbody scales in 28-36 rows. 22-34 lamellae under the 4th toe.

*Color:* Dorsal ground color light to dark brown. The dorsal surface may be unmarked or there may be a series of ocellate blotches forming vague lines. A pale, thin broken dorsolateral stripe is often present from the eye to the base of the tail. Laterally a darker brown, often with a whitish midlateral stripe from the ear to the hindlimbs. The patterning is more pronounced in juveniles and subadults. Ventrally yellowish white. The tail is light brown with irregular lighter and darker flecks.

*Ecology:* This species has probably been introduced into Bougainville from New Guinea or New Britain where it is common around towns. It is an active diurnal skink and occupies a variety of habitats from forests



to cleared and cultivated areas and suburban gardens where it is essentially terrestrial in its habits. It is oviparous with a constant clutch size of 2.

### Genus *Corucia* Gray

A monotypic genus. Head large. Limbs well developed and strongly clawed. Tail prehensile. Lower eyelid scaly. No supranasals. Prefrontals in contact or narrowly separated. Parietals widely separated.

#### *Corucia zebrata* Gray Plate 3a, 8a

*Distribution:* Bougainville, Choiseul, New Georgia, Isabel, Guadalcanal, Nggela, Malaita, San Cristobal, Ugi, Santa Ana, Shortlands.

*Description:* Average SVL 350mm, tail about 120% of SVL. Head large, wedge-shaped, snout short. Body quite robust. Limbs well developed, digits strongly clawed. Tail slender, prehensile. The frontonasal is the largest head shield. Prefrontals in contact or separated, sometimes by a small median scale. Frontal about as wide as long. Lower eyelid scaly. Frontoparietals distinct. Parietals widely separated, bordered by 1 or more pairs of enlarged temporals. Nuchals usually enlarged. The head shields are often irregular and subject to variation. Midbody scales in 35-40 rows. 19-22 lamellae under the 4th toe.

*Color:* Dorsal ground color pale olive green to grey-green to khaki with lighter and darker flecks dorsally. The rostral and nasal scales and often the frontonasal are a light yellow or cream. The tail is olive green or brown without other markings. Ventrally yellow-green to light grey-green. The iris is golden yellow to lime green. Specimens from Malaita tend to be darker in color than those from elsewhere in the Solomons.

*Ecology:* This very large skink is fairly common though not often seen because it is nocturnal, sheltering by day in hollows in the larger forest trees. The strangler fig tree *Ficus* sp. is a preferred habitat. It is almost completely arboreal though it sometimes forages on the ground at night. It is completely herbivorous and although a variety of plants are eaten, the bulk of its diet is made up of the leaves of the creeper *Epipremnum pinnatum*. *Corucia* is rather slow moving and docile. When provoked it will raise itself up and exhale with a sharp, loud hiss through its open mouth; given the opportunity, it will savagely bite its tormentor. It gives birth to a single live young that is about 1/3 the size of the adult.

### Genus *Cryptoblepharus* Wiegmann

Small terrestrial or semi-arboreal skinks. The eye is covered with an immovable transparent scale. Prefrontals well developed. Frontoparietals and interparietal fused into a single shield. Parietals in contact.

### **Cryptoblepharus poecilopleurus (Wiegmann)**

*Distribution:* This species occurs widely on many of the islands of the tropical and subtropical Pacific. In the Solomons it is known from 5 specimens collected on Rennell in 1933 (Slevin 1934).

*Description:* Average SVL 45mm, tail about 120% of SVL. Head moderate, snout somewhat elongated and pointed. Limbs well developed and overlapping when adpressed. Supranasals absent, very rarely present. Prefrontals usually in contact, rarely separated. Frontal small, shorter than its distance from the snout, in contact with the 1st and 2nd of 4 (rarely 3 or 5) supraoculars. The eye is covered with an immovable transparent spectacle. Frontoparietals and interparietal fused into a single shield. Enlarged nuchals present. The 2 mid-dorsal scale rows are transversely enlarged. Midbody scales in 24-32 (usually 28) rows. 18-25 lamellae under the 4th toe.

*Color:* Dorsal ground color greenish brown to almost black. The head and mid-dorsal area are mottled with grey or brown. A golden dorsolateral stripe is usually present from the eye to around the base of the tail. Laterally dark brown to black with lighter flecking. Ventrally pale yellow.

*Ecology:* The ecology of this skink on Rennell is unknown. Elsewhere in the Pacific it tends to be at least semi-arboreal in its habits and in Hawaii it inhabits rocky areas in the littoral zone where it feeds upon small insects and spiders and other small arthropods (McKeown 1978). It is oviparous with a constant clutch size of 2.

### **Genus *Emoia* Gray**

Small to moderate sized lizards. Lower eyelid with a palpebral disc. Supranasals present. Frontoparietals fused. Interparietal reduced in size or absent. Prefrontals separated or narrowly in contact. Parietals in contact. Preanals usually enlarged. Limbs well developed. 30 or more subdigital lamellae under the 4th toe. All species are oviparous, most species have a constant clutch size of 2.

#### **Key to Solomon Islands species of *Emoia***

1. Subdigital lamellae reasonably smooth and rounded, less than 50 under the 4th toe . . . . . 2  
Subdigital lamellae thin and blade-like, more than 50 under the 4th toe . . . . . 6
2. A white midlateral stripe present from the snout to the level of the hindlimbs . . . . . *nivarti*  
Midlateral stripe absent . . . . . 3
3. Mid-dorsal and/or dorsolateral stripes present . . . . . *caeruleocauda*  
Mid-dorsal and dorsolateral stripes absent . . . . . 4

4. A small interparietal present . . . . . 5  
Interparietal absent. Chin and throat yellow . . . . . *flavigularis*
5. Color grey to grey-green to greenish brown dorsally with a series of wavy whitish transverse bands. Snout somewhat elongate . . . . .  
. . . . . *atrocostata*  
Color uniform black or light or dark brown dorsally or brown with darker flecks. Snout not elongate . . . . . *nigra*
6. Mid-dorsal and/or dorsolateral stripes present, at least on the head and anterior body . . . . . 7  
Mid-dorsal and dorsolateral stripes absent . . . . . 8
7. Mid-dorsal and dorsolateral stripes with clearly defined borders from the head and along the body for most of its length. Ground color dark grey to brown to almost black. Tail grey-blue without other markings. Usually occurs in cleared, open areas with little canopy cover . . . . . *cyanura*  
Mid-dorsal stripe, if present, usually distinct only on the head and anterior body, fading into a pale, broad area around midbody. Dorsolateral stripes present for most of the length of the body but with ill-defined borders posteriorly. Ground color brown to black. Tail grey-blue to blue-green to bright blue with darker markings. Usually occurs in forests or in areas with some canopy cover . . . . . *maculata* superspecies complex
8. Midbody scales in 23-27 rows. A dark streak runs from the snout, through the eye and onto the neck and anterior body. Dorsally bronze or bronze-green . . . . . *cyanogaster*  
Midbody scales in 28-32 rows. No dark streak on the side of the head. Dorsally a shade of green with or without darker flecks . . . . .  
. . . . . *sanfordi*

***Emoia atrocostata* (Lesson) Plate 3b**

*Distribution:* Philippines, parts of Malay Peninsula, Caroline Is., New Guinea, Cape York in N. Australia, islands of Torres Strait, Solomon Is. In the Solomons: Bougainville, New Georgia, Guadalcanal, Malaita, Ontong Java, Bellona, San Cristobal, Ugi, Olu Malau, Shortlands.

*Description:* Average SVL 75mm, tail about 150% of SVL. Head moderate, snout elongated and narrow. Limbs well developed, overlapping when adpressed. Body fairly stout. Prefrontals separated. Supranasals are present. Frontal slightly longer than wide, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Interparietal distinct. Enlarged nuchals present. Preanals slightly enlarged. Midbody scales in 34-42 rows. 32-42 lamellae under the 4th toe.

*Color:* Dorsally grey to grey-green to almost black with lighter flecks that tend to form irregular transverse bands. Laterally black with lighter flecks. Ventrally white with a greenish hue. The limbs and tail are marked similarly to the body.

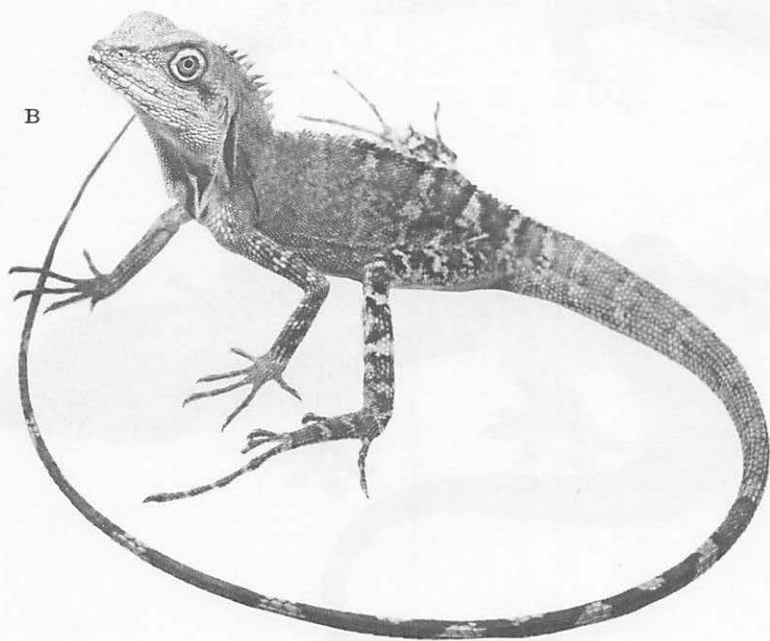
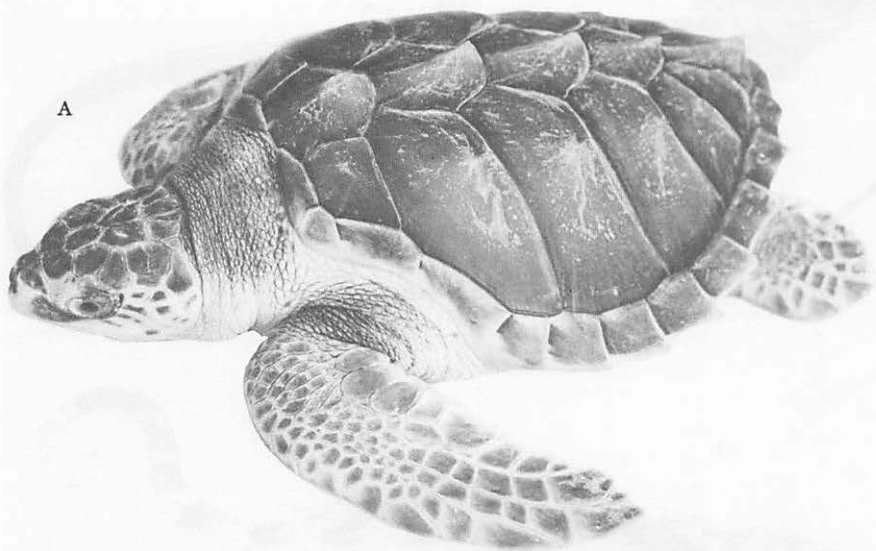
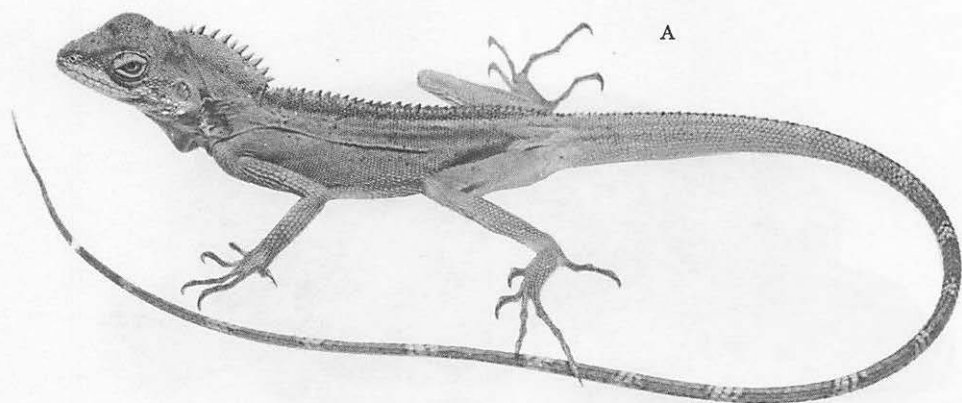


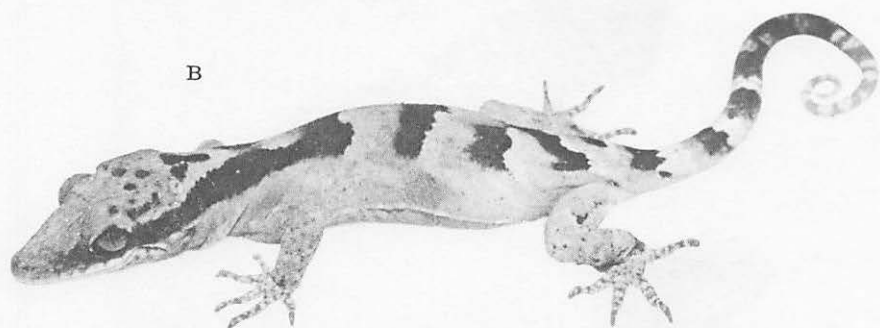
Plate 5

a. *Lepidochelys olivacea*  
Wainone Bay, San Cristobal

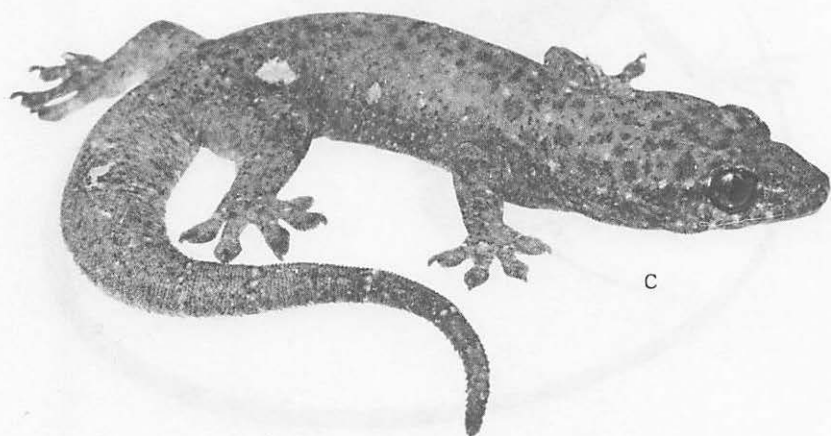
b. *Gonocephalus godeffroyi* (♂)  
Ugi



A



B

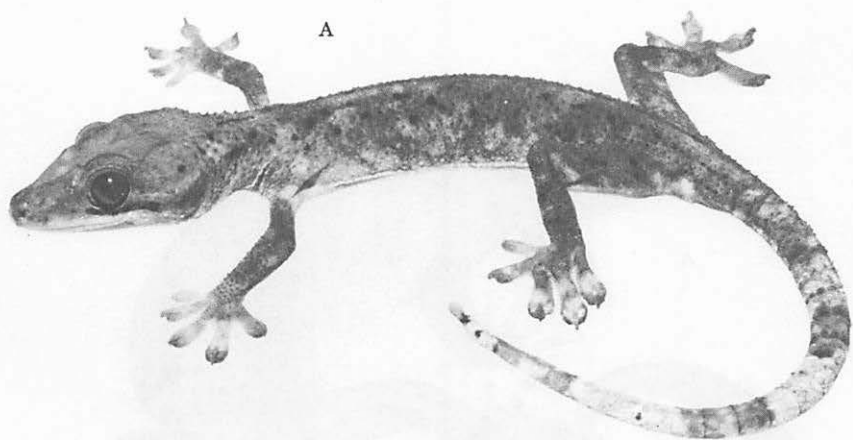


C

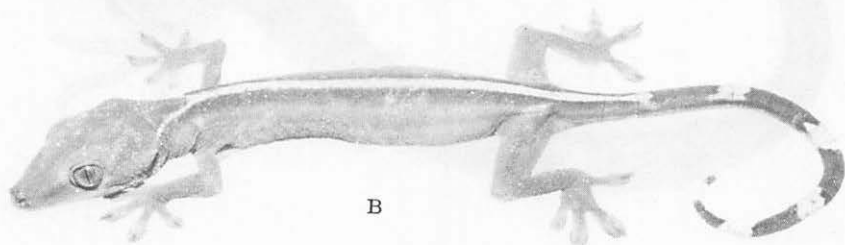
Plate 6

- a. *Gonocephalus godeffroyi* (♀)  
Malaupaina, Olu Malau  
c. *Gehyra mutilata*  
Kira Kira, San Cristobal

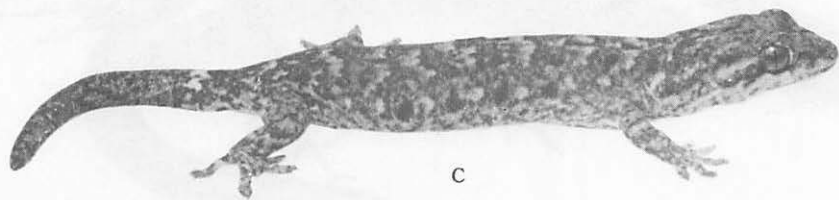
- b. *Cyrtodactylus biordinis*  
Mt Austen, Guadalcanal.



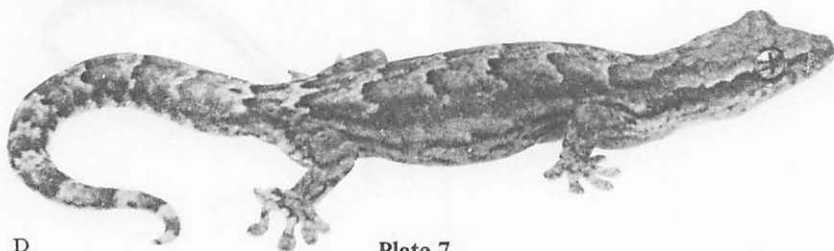
A



B



C



D

Plate 7

- a. *Gekko vittatus*  
Malaupaina, Olu Malau  
c. *Lepidodactylus guppyi*  
Malaupaina, Olu Malau

- b. *Gekko vittatus*  
Boromole, Nggela  
d. *Lepidodactylus lugubris*  
Malaupaina, Olu Malau

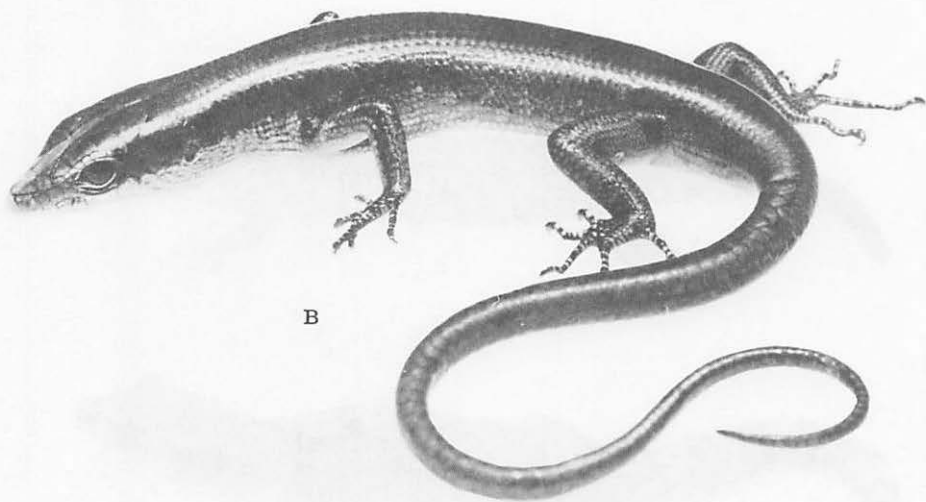
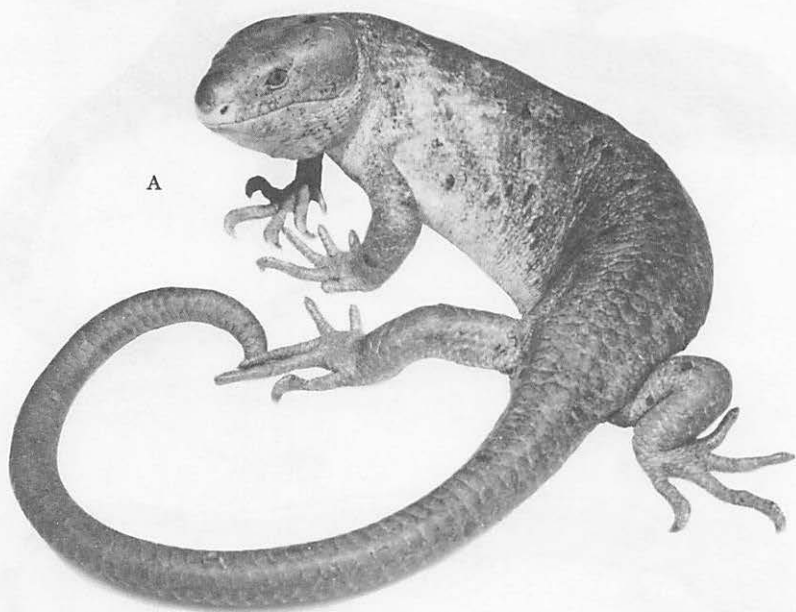


Plate 8

a. *Corucia zebrata*  
Boromole, Nggela

b. *Emoia caeruleocauda* (♂)  
Kira Kira, San Cristobal

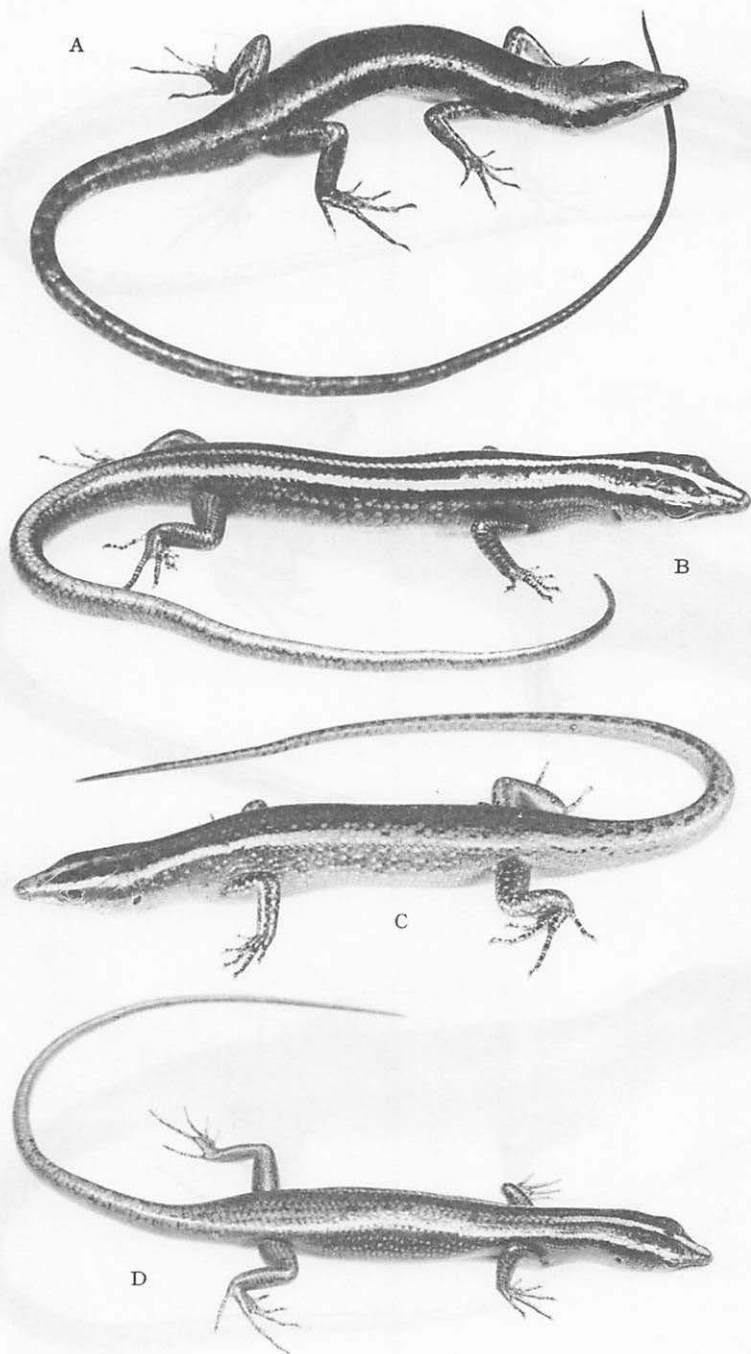
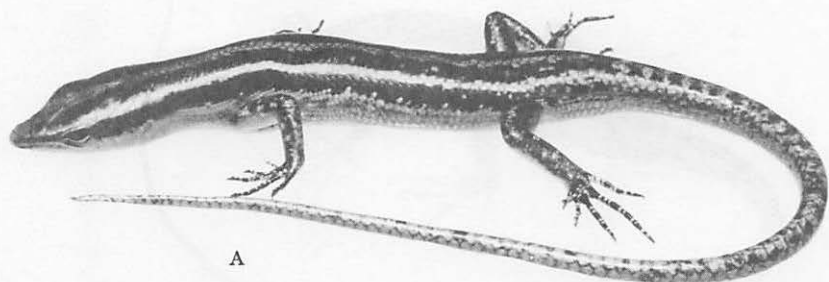


Plate 9

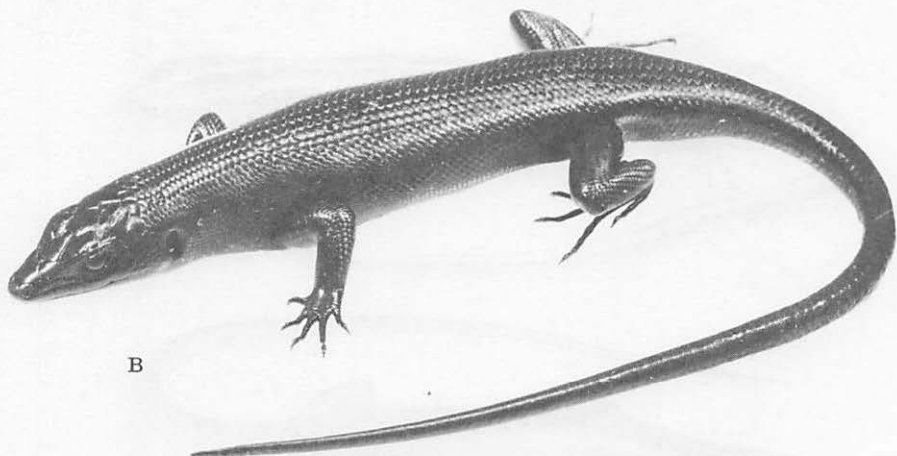
- a. *Emoia cyanogaster*  
 Malaupaina, Olu Malau  
 c. *Emoia maculata* (superspecies)  
 Honiara, Guadalcanal

- b. *Emoia cyanura*  
 Malaupaina, Olu Malau  
 d. *Emoia maculata* (superspecies)  
 Arabala, Malaita

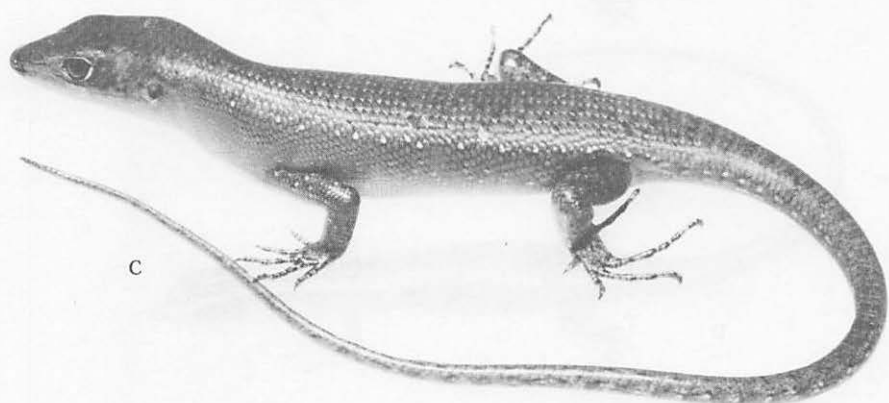




A



B

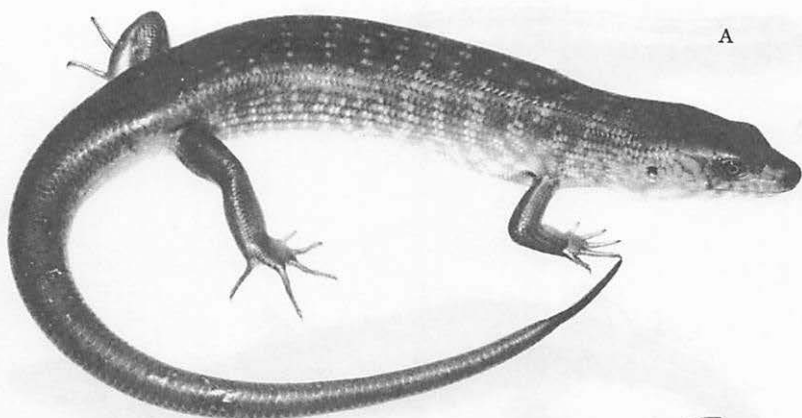


C

Plate 10

- a. *Emoia maculata* (superspecies)  
Malaupaina, Olu Malau  
c. *Emoia nigra*  
Mt Austen, Guadalcanal

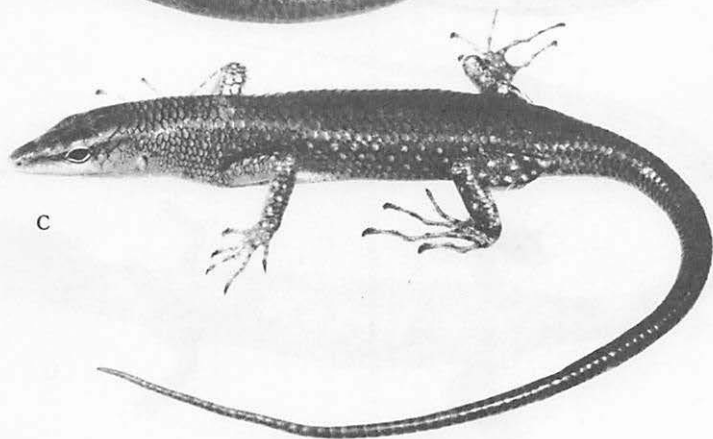
- b. *Emoia nigra*  
Malaupaina, Olu Malau



A



B

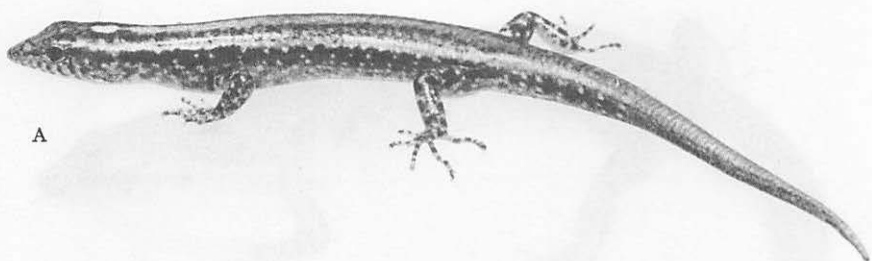


C

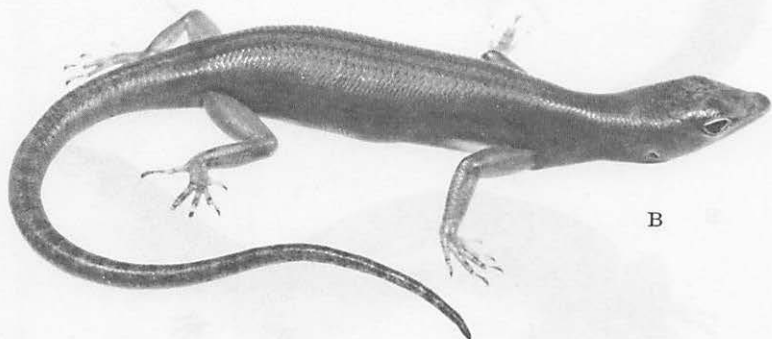
Plate 11

- a. *Eugongylus albofasciolatus*  
Boromole, Nggela
- c. *Lamprolepis smaragdina*  
Ontong Java

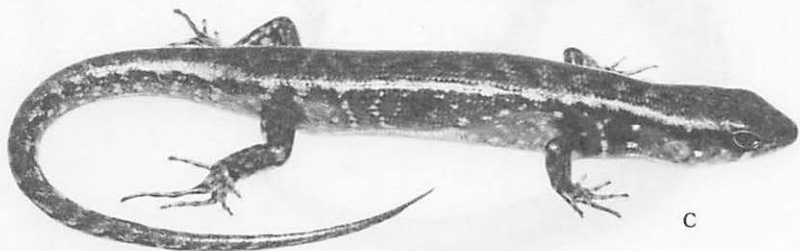
- b. *Eugongylus rufescens*  
Niupani, Rennell



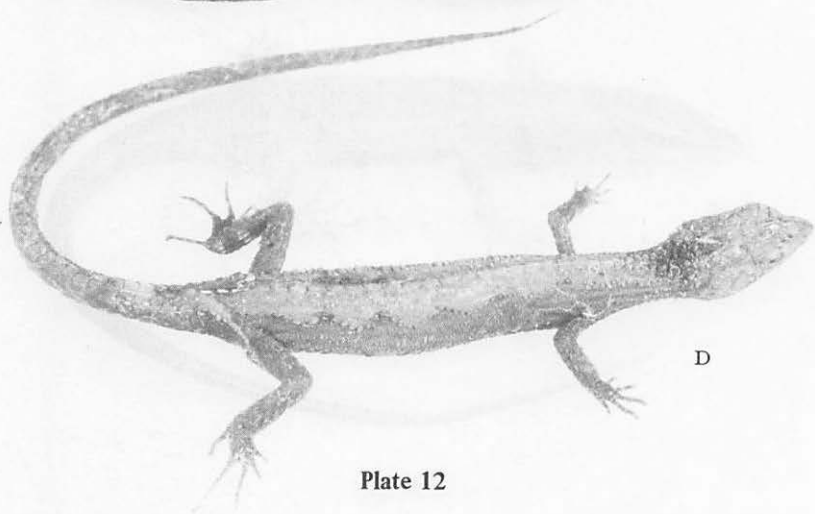
A



B



C



D

Plate 12

- a. *Lipinia noctua*  
Ugi  
c. *Sphenomorphus concinnatus*  
Mt Austen, Guadalcanal

- b. *Prasinohaema virens*  
Malaupaina, Olu Malau  
d. *Tribolonotus blanchardi*  
Boromole, Nggela

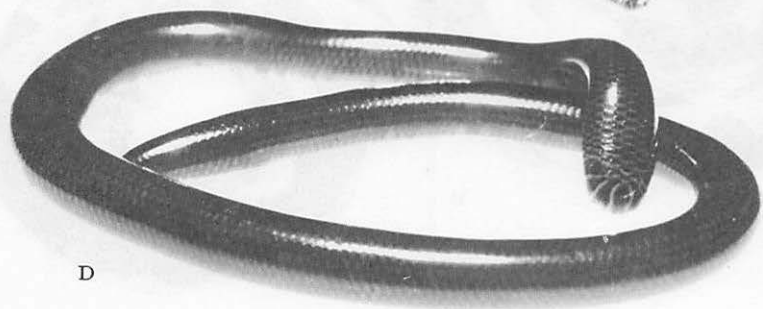
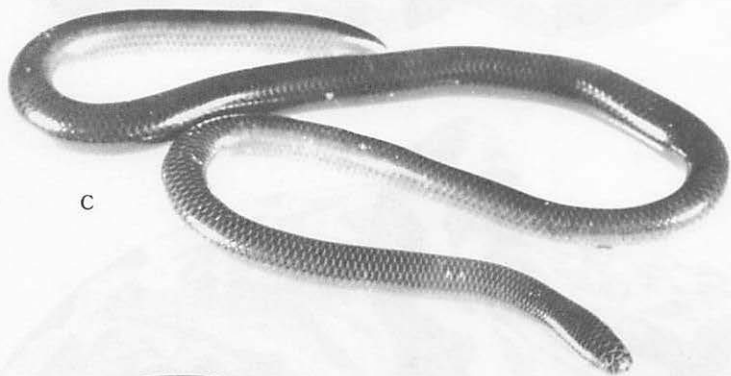
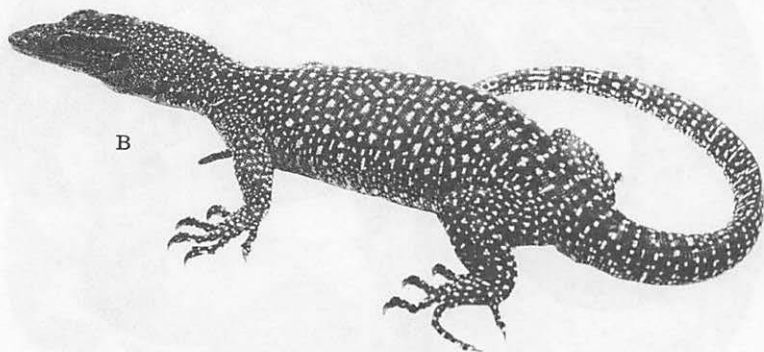
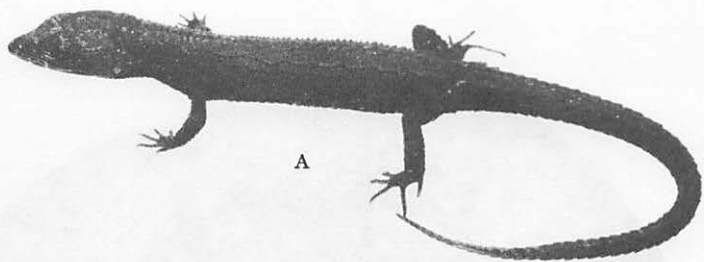
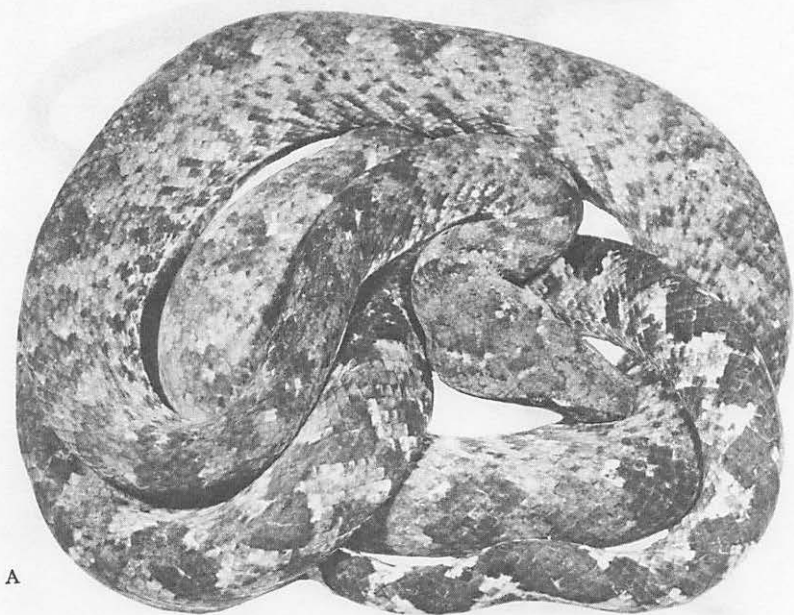


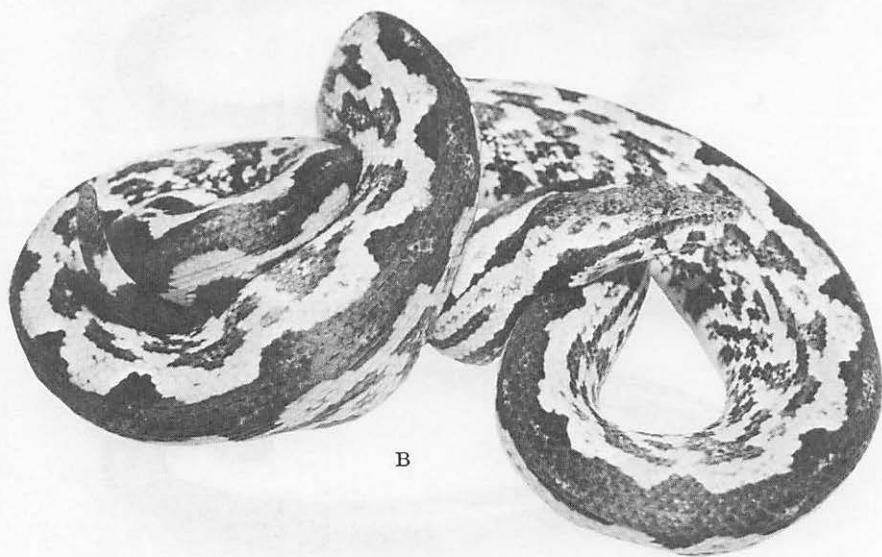
Plate 13

- a. *Tribolonotus schmidti*  
Mt Austen, Guadalcanal  
c. *Typhlina bramina*  
Honiara, Guadalcanal

- b. *Varanus indicus*  
Malaupaina, Olu Malau  
d. *Typhlina flaviventer*  
Malaupaina, Olu Malau



A



B

Plate 14

a. *Candoia bibroni*  
Lomlom, Reef Is.

b. *Candoia carinata*  
Mt Austen, Guadalcanal

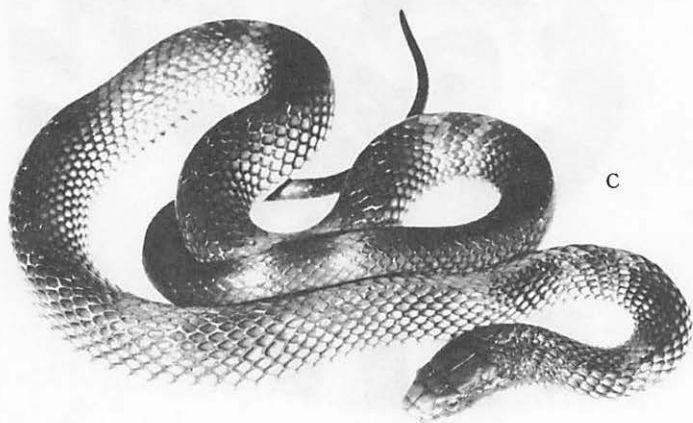
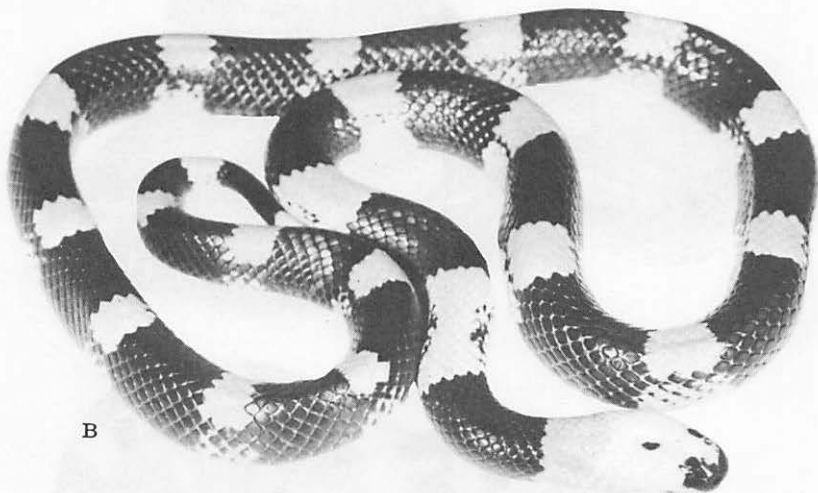
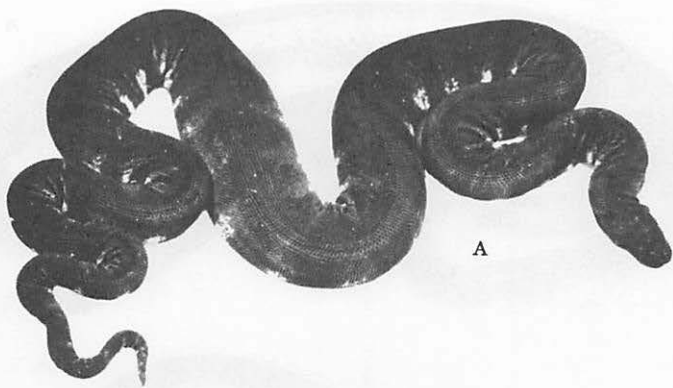


Plate 15

- a. *Acrochordus granulatus*  
Boromole, Nggela
- c. *Salomonelaps par*  
Boromole, Nggela

- b. *Loveridgelaps elapoides*  
Boromole, Nggela

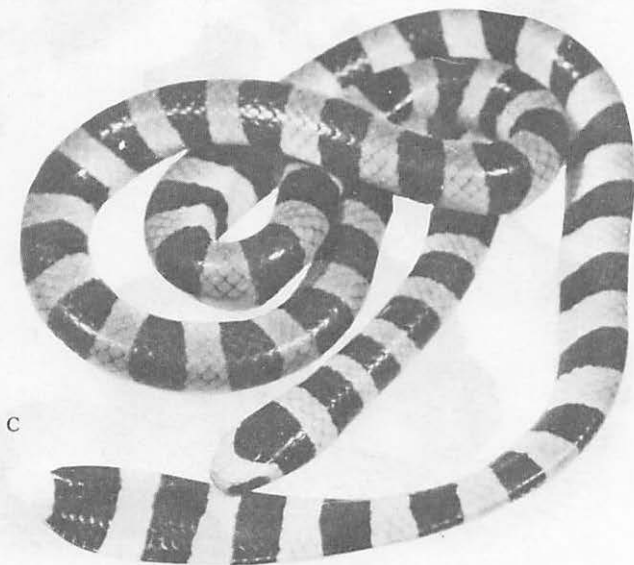
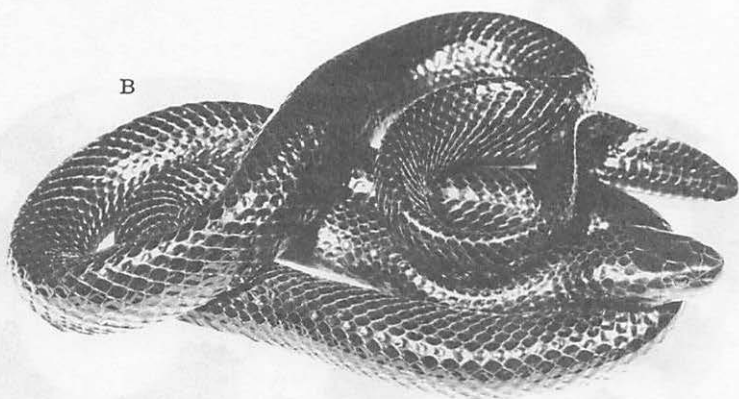
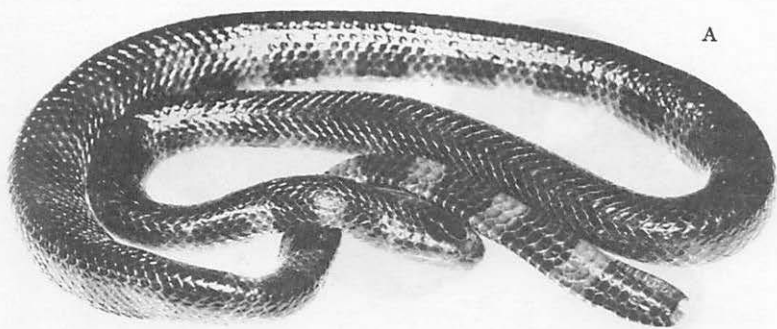


Plate 16

- a. *Laticauda crockeri*  
Lake Te-Nggano, Rennell  
c. *Laticauda laticaudata*  
Arosi, San Cristobal

- b. *Laticauda crockeri*  
Lake Te-Nggano, Rennell

*Ecology:* This is a common species with a specialized habitat; in the Solomons it only occurs on rocky foreshores bordering the sea where large populations may occur. It is an active, agile lizard and readily enters tidal pools to escape potential predators; it can stay submerged in saltwater for several minutes at a time. I have also seen it active where waves are breaking, clinging to the rock while the wave passes over it. Most of its feeding though is done in the intertidal zone. It feeds upon small invertebrates such as small crabs, isopods, some insects and spiders. Cogger (1975) reports it as a mangrove inhabitant in N. Australia; it has not exploited this niche to any extent in the Solomons. Its 2 eggs are laid well above the high water line in beach debris, driftwood or hollows in limestone rock.

*Emoia caeruleocauda* (DeVis) Plate 3c, 3d, 8b

*Distribution:* New Guinea, Louisiade Archipelago, Solomon Is. In the Solomons: Bougainville, Shortlands, Choiseul, Vella Lavella, Kolombangara, New Georgia, San Cristobal.

Walter Brown (pers. comm.) believes the distribution of the subspecies *wernerii* is not currently well known. Although the Solomons form has been referred to this subspecies in the past, I have, for the present, not referred the form described below to this subspecies.

*Description:* Average SVL 50mm, tail about 130% of SVL. Head moderate, snout short. Limbs well developed, overlapping when adpressed. Supranasals present. Prefrontals separated. A single anterior and posterior loreal. Frontal about 1.5x as long as wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals and interparietal fused into a single shield. Enlarged nuchals present. Midbody scales in 26-36 rows. 30-43 lamellae under the 4th toe.

*Color:* Dorsally black. A golden mid-dorsal stripe is present, running from the snout to a little posterior to the hindlimbs where it terminates abruptly. Two golden dorsolateral stripes run from the snout and along the body to the tail where they merge into the bright blue caudal coloration. Laterally dark brown to black with lighter flecks. Ventrally grey-white. On San Cristobal and Kolombangara *caeruleocauda* exhibits sexual dichromatism, this apparently does not occur in populations elsewhere in the Solomons but is known in New Guinea *caeruleocauda*. On San Cristobal and Kolombangara the males are golden brown dorsally. The mid-dorsal stripe may be indistinct or absent. The dorsolateral stripes are usually always present though they also may be indistinct. The tail is light brown, sometimes with a bluish hue.

*Ecology:* A common terrestrial species. On San Cristobal at least, this species appears to be intermediate ecologically between *Emoia cyanura* and *E. maculata*. While *cyanura* will almost never enter areas with dense canopy cover, preferring open, cleared areas, *maculata* is a dweller in forests and areas with at least some canopy cover. *Caeruleocauda* however,



utilizes both niches equally and in areas such as semi-cleared native gardens or overgrown gardens at the edge of the forest, the 3 species occur together. In this situation there does not appear to be any overt interspecific interaction apart from the obvious competition for insect food. The presence of 1 of these species does not preclude the presence of either of the other 2. On Bougainville, *caeruleocauda* occurs from the coast up to 1200m elevation (Webster 1969). This lizard is essentially terrestrial though it will forage in low scrub and climb a little distance up the trunks of trees. Its 2 eggs are laid in ground debris.

**Emoia cyanogaster (Lesson) Plate 3e, 9a**

*Distribution:* Caroline Is., New Guinea, islands of Torres Strait, Solomon Is., New Hebrides, Rarotonga. In the Solomons: Bougainville, Shortlands, Fauro, Mono, Choiseul, New Georgia, Isabel, Guadalcanal, Nggela, Malaita, Rennell, Ugi, Olu Malau, San Cristobal, Santa Ana, Santa Cruz, Reef Islands.

*Description:* Average SVL 80mm, tail about 250% of SVL. Head depressed, snout long and slender. Limbs well developed, overlapping when adpressed. Supranasals present. Prefrontals in contact or narrowly separated. A single anterior and posterior loreal. Frontal 2x as long as wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. A small interparietal is present. Midbody scales in 23-27 rows. 67-95 very thin lamellae under the 4th toe.

*Color:* Dorsally golden bronze or greenish bronze with or without lighter and darker flecks. A black streak runs from the nostril, through the eye and onto the neck, continuing in a lateral position until it fades out around midbody. Ventrally yellow-green to bright lime green, usually sharply differentiated from the bronze lateral coloration. Tail marked similarly to the body.

*Ecology:* A very active diurnal lizard. Largely arboreal, it does forage to some extent on the ground. It inhabits forests, gardens and plantations and shows a preference for dwelling in low scrub or on vine and creeper covered trees and tends to avoid larger, bare-trunked trees. Its average perch height varies from 1 to 6m. It feeds upon insects and spiders and smaller lizards. It lays its 2 eggs in ground debris or loose soil or in rotting timber on or above the ground. It is quite common over most of its range in the Solomons.

**Emoia cyanura (Lesson) Plate 3f, 9b**

*Distribution:* Throughout most of tropical Oceania from the Solomons to Clipperton Is. off the west coast of S. America. In the Solomons: Bougainville and adjacent smaller islands, Isabel, Russell Is., Guadalcanal, Nggela, islands along Langa Langa Lagoon on Malaita (but not mainland of Malaita), Ontong Java, San Cristobal, Ugi, Olu Malau. It probably occurs on many other smaller islands of the group.

*Description:* Average SVL 50mm, tail about 130% of SVL. Head moderate, snout somewhat short. Limbs well developed, overlapping when adpressed. Supranasals present. Prefrontals usually separated, occasionally narrowly in contact. A single anterior and posterior loreal. Frontal 1.5x as long as wide, longer than its distance from snout, in contact with 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals and interparietal fused into a single shield. Enlarged nuchals present. Preanals slightly enlarged. Midbody scales in 27-35 rows. 60-86 (usually around 65-70) very thin lamellae under the 4th toe.

*Color:* Dorsal ground color grey to brown to almost black. A golden mid-dorsal stripe runs from the snout and along the body to the base of the tail where it fades out. The borders of this stripe are distinct for most of its length. Dorsolateral stripes of equal width and distinction are present from the snout to the base of the tail. Laterally grey-brown with lighter and darker flecks. Ventrally creamy white. Tail grey to grey-blue without other markings.

*Ecology:* This lizard occurs only in dry, marginal areas such as gardens and plantations and along the seashore in areas of creeper growth. It does not enter forests or areas with closed canopy to any extent. It is usually abundant wherever it occurs. It is terrestrial in its habits though it forages over fallen timber and sometimes climbs a little distance up small trees and shrubs. It shows a high tolerance to hot, dry conditions and can be seen basking and foraging where other lizards could not tolerate the high temperatures. It feeds upon small insects and spiders. It lays its 2 eggs in ground debris or hollows in fallen timber and rocks.

### ***Emoia flavigularis* Schmidt Plate 3g**

*Distribution:* Bougainville, Shortlands, Choiseul, Isabel, Nggela.

*Description:* Average SVL 75mm, tail about 150% of SVL. Head moderate. Limbs well developed and overlapping when adpressed. Supranasals present. Prefrontals in contact or narrowly separated. A single anterior and posterior loreal. Frontal about 1.5x as long as wide, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals fused into a single shield. Interparietal consistently absent. Enlarged nuchals present. Preanals slightly enlarged. Midbody scales in 36-40 rows. 41-45 lamellae under the 4th toe.

*Color:* Golden brown dorsally with darker flecks, particularly on the posterior dorsum and tail where they sometimes form vague transverse bands. Laterally a slightly darker brown with a few yellowish spots on the side of the neck and lighter and darker flecks on the sides of the body. The throat and underside of the neck to the level of the forelimbs are bright yellow. Ventrally grey suffused with yellow. The whole body has a strong metallic gloss. The limbs, particularly the hands and feet, are blackish.

*Ecology:* A rare species closely resembling *Emoia nigra* in appearance and ecology. It is largely terrestrial though it will forage some distance up trees and shrubs and will also climb trees to escape predators. It is diurnal

and quite an active, agile species. It does not appear to occur outside forests or areas with at least some canopy cover.

**Emoia maculata** Brown (*maculata* superspecies complex) Plate 3h,  
4a-d, 9c, d; 10a

When Brown described *maculata* in 1954 together with *E. schmidti*, a closely allied species, a relatively limited number of specimens was available to him. At that time *maculata* was recorded from the islands of San Cristobal and Ugi and *schmidti* from Kolombangara and New Georgia and several small adjacent islands. Webster (1969) referred *maculata* and *schmidti* to the *maculata* superspecies complex together with similar forms from Guadalcanal and Malaita and Bougainville. On the basis of my own collections it becomes apparent that it is difficult to differentiate between *schmidti* and *maculata* and the closely allied forms from various islands of the group on the basis of Brown's characters and therefore it seems best to adopt Webster's concept of a *maculata* superspecies complex to include all of the above forms for the present time. Revision of the *maculata* superspecies complex is necessary to determine the true status of the various populations from different islands, though such revision will not be possible until large samples from these different islands are available. For the purposes of description within this book, a generalized summation of morphological characters and color and pattern for the various forms is given.

*Distribution:* Apparently endemic to the Solomons: Bougainville, New Georgia, Kolombangara and adjacent smaller islands, Isabel, Russell Is., Guadalcanal, Nggela, Malaita, San Cristobal, Ugi, Olu Malau, Shortlands. Probably occurs on other islands of the group.

*Description:* Average SVL 55mm, tail about 150% of SVL. Malaita *maculata* show sexual dimorphism in SVL, the males being larger and growing up to 70mm SVL. Head moderate. Body a little slender. Limbs well developed and overlapping when adpressed. Supranasals present. Prefrontals separated or narrowly in contact. A single anterior and posterior loreal. Frontal 1.5x as long as wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals and interparietal fused into a single shield. Enlarged nuchals present. Preanals slightly enlarged. Midbody scales in 26-35 rows. 58-96 (usually around 75-80) very thin lamellae under the 4th toe.

*Color:* Dorsal ground color brown to black, often with a bluish or greenish hue posteriorly. A golden mid-dorsal stripe may be present from the snout to around midbody where it diffuses into a pale, broad streak often broken with darker flecks. A dorsolateral stripe runs from the eye and along the body for most of its length, though the borders of this line are usually diffuse posteriorly. Laterally with small light spots which may form vague longitudinal lines. Ventrally cream to dull yellow to yellow-green to bluish green. The tail, and often the posterior body and hindlimbs, are dull blue to blue-green to very bright blue.

The tail is usually marked with black flecks which are arranged into regular pairs.

*Ecology:* *Emoia maculata* is essentially an inhabitant of lowland forest up to 1000m elevation. It does not enter areas without canopy cover to any extent. It is a semi-arboreal species, foraging over leaf litter on the forest floor and climbing up to 2-3m on small trees and creepers in search of its insect food. It is a very active, agile species; I once observed an individual on Malaupaina Is. drop from a branch 2m high to grab a grasshopper that it had observed moving on the ground. This species is very common throughout its range and in some areas high population densities occur. It lays its 2 eggs in ground debris or in rotting fallen timber.

### *Emoia mivarti* (Boulenger)

*Distribution:* Caroline Is., Marshall Is., New Guinea, New Britain, Solomon Is. In the Solomons: Bougainville.

*Description:* Average SVL 50mm, tail about 150% of SVL. Head and body moderate. Limbs well developed and overlapping when adpressed. Supranasals present. Prefrontals usually separated. A single anterior and posterior loreal. Frontal about 1.5x as long as wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals and interparietal fused into a single shield. Enlarged nuchals present. Preanals slightly enlarged. Midbody scales in 34-38 rows. 31-45 lamellae under the 4th toe.

*Color:* Dorsally light to dark brown to almost black. A lighter mid-dorsal stripe of varying width and distinction may be present or absent. Light dorsolateral stripes are usually present. A white lateral stripe is present from the snout to the level of the hindlimbs. An ill-defined whitish ventrolateral stripe is occasionally present. The tail is colored similarly to the body.

*Ecology:* A common terrestrial species. It is mostly a forest dweller though it will enter cleared areas to forage for its insect food. Like the other members of its genus in the Solomons, it is an active, diurnal species. Its 2 eggs are laid in ground debris.

### *Emoia nigra* (Hombron & Jacquinot) Plate 4e-h, 10b, c

*Distribution:* Caroline Is., Bismarck Archipelago, Solomon Is., New Hebrides, Fiji, Samoa, Tonga. In the Solomons it occurs on almost every island of the group.

*Description:* Average SVL 90mm, tail about 150% of SVL. Head moderately large. Body somewhat stout. Limbs well developed and overlapping when adpressed. Supranasals present. Prefrontals in contact or narrowly separated. A single anterior and posterior loreal. Frontal about 2x as long as wide, longer than its distance from snout, in contact with 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals fused into a single shield. A small interparietal is present.

Enlarged nuchals present. Preanals slightly enlarged. Midbody scales in 31-44 rows, 30-45 lamellae under the 4th toe.

*Color:* Uniformly black or dark brown above, sometimes with a scattering of lighter flecks laterally. Ventrally whitish to grey or yellowish to dull orange. Juveniles are dark grey or brown with indistinct darker flecks dorsally and distinct whitish spots laterally. Guadalcanal *nigra* are light brown to dark brown dorsally with darker flecks and darker brown to almost black laterally with lighter flecks. Ventrally they are white to dull cream. Juveniles from Guadalcanal are a light golden dorsally, with or without darker flecks and dark brown laterally with light spots.

*Ecology:* A very active, robust diurnal lizard. It is common in the Solomons and occurs with some abundance in many areas. Although it forages mainly on the ground, it is at least partly arboreal and will often take refuge up the nearest tree if alarmed on the ground. It occupies a wide variety of habitats from forests to gardens and plantations and along the seashore in areas with creeper growth. It feeds upon insects and spiders and smaller lizards. It lays up to 4 eggs in a clutch, usually in any suitable ground debris.

#### *Emoia sanfordi* Schmidt & Burt

*Distribution:* Solomon Is., Banks Is., New Hebrides. In the Solomons: Fauro. Walter C. Brown (pers. comm.) regards *sanfordi* as a possible western subspecies of *E. samoensis*.

*Description:* Average SVL 100mm, tail about 180% of SVL. Head moderate. Body stout. Limbs well developed and overlapping when adpressed. Supranasals present. Prefrontals in contact. A single anterior and posterior loreal. Frontal longer than wide, a little longer than its distance from snout, in contact with 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals fused into a single shield. A small interparietal is present. Enlarged nuchals present. Midbody scales in 28-32 rows. 63-77 thin lamellae under the 4th toe.

*Color:* Apparently quite variable. The following is from Schmidt & Burt's (1930) description of the holotype (from the New Hebrides): "Ground color bright green above broken by scattered dark spots on single scales; sides uniform green; head black above, the black area extending to the shoulders; venter light bluish green; soles of feet yellowish; tail grayish above, bluish at base with yellow lateral spots, grayish mottled with brown on terminal half." Schmidt & Burt do not indicate whether the above description of color is based on the live or preserved animal.

*Ecology:* Apparently quite rare in the Solomons. I can find no record of it having been collected here since Schmidt & Burt described the species in 1930, listing 2 specimens from Fauro as paratypes. It is probably an arboreal lizard as indicated by the basically green coloration and the high number of lamellae, both traits which are associated with an arboreal nature in several other *Emoia*. The number of eggs laid by *sanfordi* is not known. If Brown is correct in regarding it as a subspecies of *samoensis*,

it is likely to lay more than the 2 eggs laid by most *Emoia* as a clutch size of 5 has been recorded for *samoensis* (Greer 1968).

### Genus *Eugongylus* Fitzinger

Moderate sized terrestrial lizards. Lower eyelid scaly. Supranasals present. Prefrontals well developed, usually separated. Frontoparietals and interparietal distinct. Parietals in contact. Limbs moderate, just meeting or just failing to meet when adpressed.

#### Key to Solomon Islands species of *Eugongylus*

Midbody scales in 34-38 rows . . . . . *albofasciolatus*  
Midbody scales in 28-30 rows . . . . . *rufescens*

#### *Eugongylus albofasciolatus* (Günther) Plate 11a, 17a

*Distribution:* Moluccas, New Guinea, Torres Strait, Cape York in Australia, Solomon Is. In the Solomons: Bougainville, Fauro, New Georgia, Isabel, Guadalcanal, Nggela, Malaita, San Cristobal, Ugi, Olu Malau, Santa Ana, Santa Cruz, Shortlands. Burt & Burt (1932) also record this species from Tikopia.

*Description:* Average SVL 160mm, tail about 140% of SVL. Head moderate, snout short. Body somewhat elongated and stout. Limbs rather short, just meeting when adpressed. The base of the tail is almost as thick as the body. Supranasals present. Prefrontals separated. A single anterior and posterior loreal. Frontal 2x as long as wide, longer than its distance from snout, in contact with 1st and 2nd of 4 (sometimes 5) supraoculars. Lower eyelid scaly. Frontoparietals and interparietal distinct. External ear opening with several small overlapping lobules anteriorly. Midbody scales in 34-38 rows. 16-22 lamellae under the 4th toe.

*Color:* Dorsally light to dark brown with lighter transverse bands that are more distinct on the anterior 1/2 of the body. The lips are barred with dark streaks which continue onto the throat. Ventrally cream without other markings. The whole body has a strong opalescent sheen. The tail is colored similarly to the body though without the lighter bands.

*Ecology:* An uncommon species. It is occasionally found moving about during the day during overcast conditions or in areas of heavy shade, otherwise it tends to a crepuscular or nocturnal existence. Mainly terrestrial, though I have seen it foraging a little distance up the trunks of large trees at night. It shelters in leaf litter and under fallen timber on the forest floor and in crevices among the root systems of large trees during the day. It is sometimes found under piles of coconut husks in plantations. I have also seen *albofasciolatus* take refuge down the burrows of land crabs. Food consists of insects and spiders, small land crabs and smaller lizards. It is oviparous, laying up to 5 eggs.

**Eugongylus rufescens (Shaw) Plate 11b, 17b**

*Distribution:* Ceram, Timor, New Guinea and adjacent archipelagos, Torres Strait, Solomon Is. In the Solomons: Rennell.

*Description:* Average SVL 110mm, tail about 120% of SVL. Head moderate. Body elongated and stout. Limbs short, not meeting when adpressed. Supranasals present. Prefrontals usually separated. A single anterior and posterior loreal. Frontal about 2x as long as wide, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid scaly. Frontoparietals and interparietal distinct. Ear opening with several small overlapping lobules anteriorly. Midbody scales in 28-30 rows. In young specimens the scales are sometimes multicarinate. 16-21 lamellae under 4th toe.

*Color:* Adults uniformly light to dark brown above with an opalescent sheen. Lips barred with faint dark bars which may continue onto the throat. Ventrally yellowish. Juveniles are maroon to red-brown with a series of narrow white transverse bands.

*Ecology:* This species is quite common on Rennell. Its habits are similar to those of *albofasciolatus* excepting that it tends to be more active diurnally though it will not move around in areas of open sunlight. It shelters under fallen timber and limestone rock in the forest on Rennell. Food probably consists of small insects, spiders and small lizards.

**Genus Geomyersia Greer & Parker**

Body depressed. Prefrontals absent. A single median internuchal scale present between a pair of nuchals. Lower eyelid with a palpebral disc.

**Geomyersia glabra Greer & Parker Plate 17c**

*Distribution:* Bougainville, Nggela.

*Description:* Average SVL 35mm, tail about 100% of SVL. Head very small, snout short. Body depressed, elongated. Limbs short, failing to meet when adpressed. Digits pentadactyl. Prefrontals absent. A single loreal is present. Frontal broadly in contact with the frontonasal and the 1st and 2nd of 4 supraoculars. Lower eyelid with a palpebral disc. Frontoparietals fused into a single shield. Interparietal distinct. A single pair of nuchals are present, separated by a small median scale. Median preanals enlarged. Midbody scales in 22-24 rows. 11-15 lamellae under the 4th toe.

*Color:* Dorsally a shade of light or dark brown. A series of anteriorly directed, dark chevron markings are present from the neck and along the body in a mid-dorsal position and along the top of the tail. A broken dark line runs from behind the eye, along the body in a dorsolateral position and onto the tail. Laterally dark brown to black. Ventrally grey with darker spots which become thicker on the posterior venter and underside of the tail. The iris is a bright orange. There are usually light cream sutures between the supralabials and the parietals are often lighter in color than the head and dorsum.

*Ecology:* This small lizard is nocturnal and a burrower which no doubt accounts in part for its apparent rarity. Specimens I have found on Nggela have been sheltering under fallen timber and stones in moist conditions in river valleys in rainforest at about 200m elevation. On Bougainville it has been found from 150m to over 1000m. It is oviparous and apparently lays a single egg at a time (Greer & Parker 1968b). Food probably consists of very small insects and their larvae.

### Genus *Lamprolepis* Fitzinger

Small to moderate sized lizards. Lower eyelid scaly. Limbs well developed, overlapping when adpressed. Frontoparietals and interparietal distinct. Enlarged nuchal scales present. Parietals in contact.

#### *Lamprolepis smaragdina* (Barbour) Plate 11c, 17d

*Distribution:* Taiwan, Philippines, Sulu Archipelago, Sulawesi, Caroline Is., Marshall Is., Indo-Australian Archipelago, New Guinea, Solomon Is. In the Solomons: Bougainville, Shortlands, Fauro, Mono, Choiseul, Gizo, Kolombangara, New Georgia, Isabel, Russell Is., Malaita, Santa Cruz, Reef Is., Ontong Java.

*Description:* Average SVL 100mm, tail about 120% of SVL. Head moderate, somewhat depressed, snout slender. Limbs well developed, overlapping when adpressed. Supranasals absent. Prefrontals usually separated, sometimes in contact. A single anterior and posterior loreal. Frontal 1.5x as long as wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid scaly. Frontoparietals and interparietal distinct. Ear opening with 2 or 3 small overlapping lobules anteriorly. Enlarged nuchals present. Preanals enlarged. A distinctive enlarged scale is present on the heel of the hindlimb, this scale is more pronounced in males. Midbody scales in 22-24 rows. 26-35 lamellae under the 4th toe, the distal lamellae compressed.

*Color:* Bright green above, with or without darker flecks. Ventrally yellow to yellow-green to greenish white. The hindlimbs are mottled with brownish and whitish blotches. Specimens from Ontong Java are drab olive green dorsally, lighter on the head and anterior body. There are lighter and darker flecks dorsally and laterally.

*Ecology:* This distinctive diurnal skink is almost completely arboreal though it occasionally comes to the ground to forage. Mostly insectivorous, though some flowers and fruits are eaten. It prefers to inhabit the larger, bare-trunked trees in forest areas and is also a common inhabitant of the palms in coconut plantations in some areas. It is essentially a dweller on the trunks of trees rather than the branches. It is very swift moving and quite agile. *Smaragdina* is oviparous, laying its 2 eggs in rotting timber or humus on or above the ground. It is fairly common over most of its range in the Solomons, though particularly abundant in the Santa Cruz group and Reef Islands.



## Genus *Lipinia* Gray

Small, slender lizards, usually marked with distinctive longitudinal striping. Head depressed. Supranasals absent. Lower eyelid with a palpebral disc. Frontoparietals distinct or fused. Median preanals enlarged.

*Lipinia noctua* (Lesson) Plate 12a, 17e

*Distribution:* Moluccas, New Guinea and nearby islands, much of tropical Oceania. In the Solomons: Bougainville, Shortlands, New Georgia, Guadalcanal, Nggela, San Cristobal, Ugi, Olu Malau.

*Description:* Average SVL 45mm, tail about 120% of SVL. Head elongated, depressed, snout rather long and pointed. Limbs well developed, overlapping when adpressed. Supranasals absent. Prefrontals in contact or narrowly separated. A single anterior and posterior loreal. Frontal long and kite-shaped, much longer than its distance from the snout, in contact with the 1st and 2nd and occasionally the 3rd of 4 supraoculars. Lower eyelid with a palpebral disc. Enlarged nuchals present. Median preanals enlarged. Midbody scales in 23-30 rows. 17-25 lamellae under the 4th toe.

*Color:* Head dark brown with black flecks. A more or less well defined yellow spot present on occiput. Continuous with this spot is a yellow mid-dorsal stripe which terminates around the level of the hindlimbs. Dorsally golden brown to black. Lips are usually barred with black and white. A thick black line runs from snout, through eye and along body in a dorsolateral or midlateral position, breaking up into a series of heavy spots a little anterior to the hindlimbs. The tail is light brown with lighter and darker flecks. Ventrally white to yellowish.

*Ecology:* This lizard is rare in the Solomons and little is known of its habits. It is at least partly arboreal although I have collected specimens on the ground, including one on Ugi that was sheltering under a log in a cleared area adjacent to a native village and one on Malaupaina Is. that was sheltering in driftwood at the edge of a rocky beach. On Nggela I have found *noctua* living in large trees, particularly mango trees. This lizard is essentially diurnal though at times crepuscular. It gives birth to 1 or 2 live young.

## Genus *Prasinohaema* Greer

Small to medium sized arboreal skinks. Blood plasma and other tissues green. Tail prehensile with glandular scales on its ventral tip.

*Prasinohaema virens* (Boulenger) Plate 12b, 17f

*Distribution:* New Guinea, Solomon Is. In the Solomons: Bougainville, Shortlands, Mono, New Georgia, Guadalcanal, Nggela, Malaita, San Cristobal, Ugi, Olu Malau, Santa Ana, Santa Cruz, Reef Is.

*Description:* Average SVL 50mm, tail about 120% of SVL. Head elongate, quite depressed. Body slender. Limbs well developed, overlapping when adpressed. Tail prehensile. Supranasals absent. Prefrontals well developed, in contact. A single anterior and posterior loreal. Frontal 2x as long as wide, longer than its distance from snout, in contact with 1st and 2nd of 5 supraoculars. Lower eyelid with a palpebral disc. A large interparietal, much larger than each frontoparietal. Parietals narrowly in contact behind the interparietal. External ear opening with 3 or 4 lobules at its anterior edge. Midbody scales in 32-38 rows. Digits expanded proximally with 14-18 lamellae on the expanded portion and 6-7 on the compressed portion of the 4th toe.

*Color:* Uniformly pale green to light olive green above. An indistinct vertebral stripe is present in some individuals. Ventrally bright yellow to yellow-green.

*Ecology:* This common skink is totally arboreal; even if forced to descend down the trunk of a tree to within a short distance of the ground, it will invariably try to escape up the tree rather than seek shelter on the ground. It lives on larger and smaller trees and woody vines and creepers. Its perch height varies from 2-20m or more. It is a forest dweller and rarely enters cleared areas. It is quite active though not as agile as some of the arboreal *Emoia* for example. When moving, it keeps its head and body pressed close to the substrate. At night it sleeps in an exposed position on a branch or leaf. Its 2 eggs are laid in hollows in trees or in moist humus at the bases of trees.

This species and 4 other members of its genus from New Guinea are unusual among vertebrates in that they possess a green blood pigment. This pigment is thought to be the bile pigment, biliverdin or a close chemical relative (Greer & Raizes 1969). This green coloration is apparent when the lizard opens its mouth and the green tongue and mucosa can be seen. The eggs are also green. The subdigital lamellae of this lizard function similarly to those of many gekkonids and enable it to move on smooth vertical surfaces or on the underside of branches; I have seen captive *Prasinohaema* climb up the wall of a glass aquarium.

### Genus *Sphenomorphus* Fitzinger

Small to moderate sized lizards. Lower eyelid scaly. Frontoparietals well developed. Parietals in contact. Limbs poorly to moderately well developed, pentadactyl.

#### Key to Solomon Islands species of *Sphenomorphus*

1. Head shields partially fragmented . . . . . 2  
    Head shields not fragmented . . . . . 3
2. One to 2 pairs of nuchals. Midbody scales in 53-60 rows. Large size  
    (up to 160mm SVL) . . . . . *taylori*

- No enlarged paired nuchals. Midbody scales in 42-46 rows. Moderate size (up to 72mm SVL) . . . . . *fragosus*
3. Enlarged paired nuchal scales present . . . . . 4  
 Enlarged paired nuchal scales absent . . . . . 7
4. Prefrontals in contact, or if separated, adpressed limbs meet or overlap . . . . . 5  
 Prefrontals separated. Adpressed limbs fail to meet. Midbody scales in 22-26 rows. 15-17 lamellae under the 4th toe . . . . . *solomonis*
5. 26 or more scale rows at midbody . . . . . 6  
 22-25 scale rows at midbody. 18-21 subdigital lamellae under the 4th toe. Small size (average SVL 35mm) . . . . . *bignelli*
6. Midbody scales in 32-41 rows. 20-29 lamellae under the 4th toe. Prefrontals usually in contact, rarely separated. Central and W. Solomons . . . . . *cranei*  
 Midbody scales in 26-30 rows. 18-23 lamellae under the 4th toe. Prefrontals in contact. E. Solomons . . . . . *undulatus*
7. Midbody scales in 33 or more rows. Adpressed limbs meet or overlap . . . . . 8  
 Midbody scales in 28-32 rows. 13-20 lamellae under the 4th toe. Prefrontals in contact. Adpressed limbs do not meet . . . . . *tanneri*
8. Average SVL 120mm. Adpressed limbs barely meet . . . . . *woodfordi*  
 Average SVL 70mm. Adpressed limbs overlap . . . . . 9
9. Prefrontals in contact. 36-47 midbody scale rows. Normally 4 supraoculars . . . . . *concinnatus*  
 Prefrontals narrowly separated. 36 Midbody scale rows. Five supraoculars (in the unique specimen) . . . . . *transversus*

**Sphenomorphus bignelli** Schmidt Plate 17g

*Distribution:* Kolombangara, Guadalcanal, Nggela. A specimen of *Sphenomorphus minutus* from the Russell Is. (Burt & Burt, 1932) probably refers to this species.

*Description:* Average SVL 35mm, tail about 110% of SVL. Head small, snout pointed. Body slightly elongated. Limbs moderate, overlapping when adpressed. Supranasals absent. Prefrontals well developed, usually separated, sometimes narrowly in contact. A single anterior and posterior loreal. Frontal about 2x as long as wide, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid scaly. Interparietal distinct. Enlarged nuchals present. Preanals slightly enlarged. Midbody scales in 22-25 rows. 18-21 lamellae under the 4th toe. Certain characters exhibited by this species are atypical of *Sphenomorphus* and it may more properly belong to another genus. The iris of most *Sphenomorphus* is dark brown whereas *bignelli* has an orange-red iris. Revision of this species is necessary to determine its true generic status.

*Color:* Dorsally brown with irregular lighter and darker flecks. The parietals are often lighter in color than the head and dorsum. An indistinct, darker dorsolateral line bordered above by a narrow lighter line is

present from the eye and along the body and part of the tail. The tail is sometimes lighter in color than the body. Laterally the body is flecked with light and dark markings on the brown ground color. Ventrally grey to cream. The whole body has a strong opalescent sheen.

*Ecology:* A reasonably common species. It is mainly diurnal and often moves about in the forest in open areas with ample shade, foraging for the small insects and their larvae that it feeds upon. It can also be found sheltering under leaf litter and fallen timber but does not appear to be a burrower, darting into the surrounding leaf litter if its cover is removed. Like all *Sphenomorphus* in the Solomons it is completely terrestrial.

**Sphenomorphus concinnatus** (Boulenger) Plate 12c, 17h

*Distribution:* Bougainville and neighboring smaller islands, Shortlands, Fauro, Choiseul, Gizo, Kolombangara, Ranongga, Isabel, Guadalcanal, Nggela, Malaita.

*Description:* Average SVL 65mm, tail about 100% of SVL. Head moderate, snout quite short. Body fairly stout. Limbs well developed, overlapping when adpressed. A supranasal scale is usually absent but may be present in some specimens. Prefrontals in contact. A single anterior and posterior loreal (a small scale is often present above the anterior loreal; this could be regarded as a double anterior loreal). Frontal kite-shaped, about 2x as long as wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 (very rarely 5) supraoculars. Lower eyelid scaly. No enlarged paired nuchals though some individuals may have 1 or 2 enlarged nuchals. Preanals slightly enlarged. Midbody scales in 36-47 rows. 18-27 lamellae under the 4th toe.

*Color:* Dorsally golden brown with a more or less regular series of darker flecks. Usually a darker brown laterally with whitish spots that may form vague vertical bars. Many specimens have a black line running from the eye and onto the neck. Most specimens have a large black spot on the side of the neck behind the ear. Ventrally yellowish to dull orange-brown, this color often sharply differentiated from the grey of the throat area. The tail is colored similarly to the body.

*Ecology:* This common species is mostly diurnal though at times crepuscular. Greer & Parker (1967b) report *concinnatus* as being normally crepuscular on Bougainville. Elsewhere in the Solomons, particularly on Guadalcanal and Nggela where I have observed *concinnatus*, it is largely diurnal in its habits. It is terrestrial and occurs in forests and semi-cleared areas provided there is ample canopy cover, and is often encountered sunning itself in patches of weak sunlight. It forages in the leaf litter for the small insects and spiders that it feeds upon. It is quite an active lizard and rapidly darts into the leaf litter if any attempt is made to approach it. It gives birth to 1 to 3 live young.

**Sphenomorphus cranei** Schmidt Plate 18a

*Distribution:* Bougainville, Shortlands, Isabel, Guadalcanal, Nggela.

*Description:* Average SVL 60mm, tail about 150% of SVL. Head moderate. Body elongated. Limbs moderate, just meeting when adpressed. Supranasals absent. Prefrontals in contact or narrowly separated. A single anterior and posterior loreal. Frontal about 2x as long as wide, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid scaly. Enlarged paired nuchals usually present. Preanals slightly enlarged. Midbody scales in 32-41 rows. 20-29 lamellae under the 4th toe.

*Color:* Dorsally light or dark brown with irregular wavy transverse lighter and darker bands. A thick black stripe runs from the eye and along the body in a dorsolateral position to the tail. This stripe is broken at regular intervals by the lighter dorsal bands which continue onto the lateral area where they become more distinct. The lips are usually barred with black and white. The anterior venter is yellowish, becoming orange-red posteriorly, this color extending to the underside of the tail.

*Ecology:* An uncommon species of secretive habits. It is sometimes diurnally active in heavily shaded areas otherwise tends to a crepuscular existence. It is fairly dependent upon moisture and cool conditions and is often found in the vicinity of forest streams, sheltering in holes in the bank or under rocks at the sides of these streams. On Nggela it is often found in association with *Tribolonotus blanchardi*, living under stones in moist stream beds.

#### **Sphenomorphus fragosus Greer & Parker**

*Distribution:* Bougainville.

*Description.* Average SVL around 60mm. Head moderate, snout short. Body a little stout. Limbs well developed, overlapping when adpressed. Head scales fragmented. Supranasals present; prefrontals separated by 1 or more small scales which also separate the frontal from the frontonasal. Two anterior and posterior loreals. The frontal is in contact with the 1st, 2nd and 3rd of 5 supraoculars. Lower eyelid scaly. Enlarged paired nuchals absent. Midbody scales in 42-46 rows. 18-21 lamellae under the 4th toe.

*Color:* Dorsally brown with transversely arranged darker spots. A black dorsolateral line is present. Laterally grey-brown, sometimes with lighter flecks. Ventrally yellow with or without darker spotting. The tail is marked similarly to the body.

*Ecology:* A poorly known species. Essentially montane and probably cryptozoic.

#### **Sphenomorphus solomonis (Boulenger) Plate 18b**

*Distribution:* Bougainville, Shortlands, Fauro, Choiseul, Isabel, Guadalcanal, Nggela, Malaita.

*Description:* Average SVL 50mm, tail about 120% of SVL. Head small, snout short. Body elongated. Limbs poorly developed, not meeting when adpressed. Digits very small. Supranasals absent. Prefrontals separated. A single anterior and posterior loreal. Frontal about 2x as long as wide, longer than its distance from snout, in contact with 1st and 2nd of

4 supraoculars. Lower eyelid scaly. Enlarged nuchals present. Preanals slightly enlarged. Midbody scales in 22-30 rows. 11-18 lamellae under the 4th toe.

*Color:* Dorsally dark brown with black and whitish flecks. Laterally dark brown to almost black, sometimes with whitish flecks that may form vague vertical bars. Yellowish ventrally, often with a scattering of darker spots. All the body scales are very smooth and glossy.

*Ecology:* A common cryptozoic species in forests and sometimes also in plantations. It lives under fallen timber and mounds of ground debris in moist conditions. On Guadalcanal it is often found in company with *Tribolonotus schmidti*. It is crepuscular and nocturnal, foraging in leaf litter for the small insects that it feeds upon. It is oviparous, laying up to 3 eggs.

### **Sphenomorphus tanneri Greer & Parker**

*Distribution:* Bougainville, Shortlands, Choiseul.

*Description:* Average SVL 35mm, tail about 110% of SVL. Head small, snout obtusely conical. Limbs small, not meeting when adpressed. Supranasals absent. Prefrontals in contact. A single anterior and posterior loreal. Frontal only slightly longer than wide, in contact with the 1st and 2nd of 4 supraoculars. Lower eyelid scaly. No enlarged nuchals. Enlarged preanals present. Midbody scales in 28-32 rows. 13-20 lamellae under the 4th toe.

*Color:* Dorsally dark brown to almost black with small pale spots on body and tail. Lighter spots are present dorsolaterally, often forming a distinct line. Laterally similar to the dorsal coloration though lighter. The gular area is brown to black, fading to yellowish ventrally. The area around the vent and underside of the tail is dull red.

*Ecology:* Quite common on Bougainville, apparently uncommon elsewhere in its range. A cryptozoic species preferring moist conditions, usually under rotting vegetation and fallen timber. It is oviparous, laying 2 eggs.

### **Sphenomorphus taylori Burt**

*Distribution:* Bougainville.

*Description:* Average SVL 150mm, tail about 130% of SVL. Body elongated. Head shields fragmented, subject to variation. Supranasals usually present. Prefrontals separated by 1 or more small scales. Two or more anterior loreals. Frontal usually entire or may be divided, longer than its distance from the snout, in contact with the 1st, 2nd and 3rd of 5 to 7 supraoculars. Interparietal distinct. Enlarged nuchals usually absent. Midbody scales in 53-60 rows. 27-35 lamellae under the 4th toe.

*Color:* Dark brown dorsally with yellowish transverse bands which are more distinct laterally. Ventrally yellowish brown, often with darker spotting.

*Ecology:* A rare and poorly known species. Essentially montane and probably cryptozoic.

**Sphenomorphus transversus** Greer & Parker

*Distribution:* Known from a single specimen from Bougainville.

*Description:* SVL 68mm, tail 92mm. Head moderate, snout pointed. Limbs well developed, overlapping when adpressed. Supranasals absent. Prefrontals barely separated. Frontal longer than wide, longer than its distance from snout, in contact with 1st, 2nd and 3rd of 5 supraoculars. Lower eyelid scaly. Interparietal distinct. Enlarged nuchals absent. Midbody scales in 36 rows. 28-29 lamellae under the 4th toes.

*Color:* Dorsally light olive with a series of darker transverse bands from the neck to the base of the tail. A dark stripe runs through the eye. Ventrally the body and tail are yellow.

*Ecology:* Greer & Parker (1971) report the unique specimen as collected "...under a decaying log on the steep side of a montane river valley covered with tall primary forest."

**Sphenomorphus undulatus** (Peters & Doria) Plate 18c

*Distribution:* New Guinea, Solomon Is. In the Solomons: San Cristobal, Ugi, Olu Malau. Comparative studies are required to determine whether specimens from the Solomons are in fact true *undulatus*, they may represent an undescribed species. For the purposes of description here, only those specimens from the Solomons are considered.

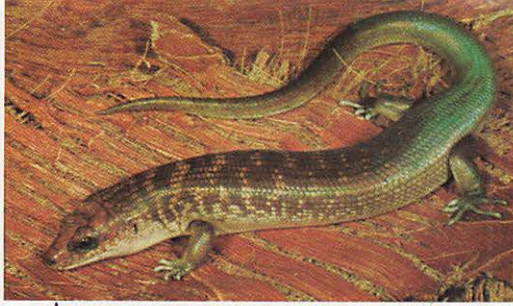
*Description:* Average SVL 40mm, tail about 150% of SVL. Head moderate. Body elongate. Limbs short, just meeting when adpressed. Supranasals absent. Prefrontals broadly in contact. A single anterior and posterior loreal. Frontal longer than wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 supraoculars. Interparietal slightly reduced in size. Enlarged nuchals present. Midbody scales in 26-30 rows. 18-23 lamellae under the 4th toe.

*Color:* Dorsally light or dark brown with a series of lighter blotches which may be arranged into irregular transverse bands in some individuals. A broken, though distinct black line runs from the snout, through the eye and along the body in a dorsolateral position and continues onto the tail. Ventrally yellow-orange to red in the region of the vent and underside of the tail. Some specimens have a scattering of fine black spots ventrally.

*Ecology:* A cryptozoic species inhabiting loose earth and debris in and under fallen timber. It is also found under piles of husks in coconut plantations. It is mainly crepuscular though it sometimes moves about in the open during the day in areas of heavy shade or when conditions are overcast. It shows a fair tolerance to dry conditions, often being found under rocks and timber where there is little moisture. On San Cristobal it tends to inhabit the drier ridge tops rather than the wetter valleys. It is reasonably common in the E. Solomons.

**Sphenomorphus woodfordi** (Boulenger) Plate 18d

*Distribution:* Bougainville, Shortlands, Fauro, Nggela, San Cristobal, Ugi.



A



B



C



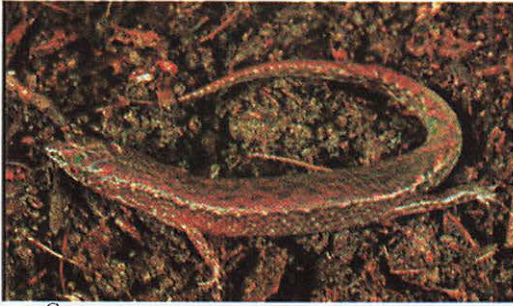
D



E



F



G



H

Plate 17

- a. *Eugongylus albofasciolatus*  
Malaupaina, Olu Malau
- c. *Geomyersia glabra*  
Boromole, Nggela
- e. *Lipinia noctua*  
Kira Kira, San Cristobal
- g. *Sphenomorphus bignelli*  
Mt Austen, Guadalcanal

- b. *Eugongylus rufescens*  
Niupani, Rennell
- d. *Lamprolepis smaragdina*  
Arabala, Malaita
- f. *Prasinohaema virens*  
Kira Kira, San Cristobal
- h. *Sphenomorphus concinnatus*  
Mt Austen, Guadalcanal





A



B



C



D



E



F



G



H

Plate 18

- a. *Sphenomorphus cranei*  
Mt Gallego, Guadalcanal
- c. *Sphenomorphus undulatus*  
Malaupaina, Olu Malau
- e. *Tribolonotus blanchardi*  
Boromole, Nggela
- g. *Varanus indicus*  
Malaupaina, Olu Malau

- b. *Sphenomorphus solomonis*  
Mt Austen, Guadalcanal
- d. *Sphenomorphus woodfordi*  
Boromole, Nggela
- f. *Tribolonotus schmidti*  
Mt Austen, Guadalcanal
- h. *Varanus indicus* (juvenile)  
Malaupaina, Olu Malau



A



B



C



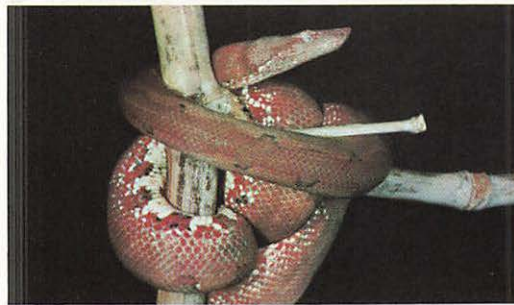
D



E



F



G



H

Plate 19

- a. *Typhlina angusticeps*  
Malaupaina, Olu Malau
- c. *Typhlina flaviventer*  
Malaupaina, Olu Malau
- e. *Typhlina willeyi*  
Mt Austen, Guadalcanal
- g. *Candoia carinata*  
Boromole, Nggela

- b. *Typhlina bramina*  
Honiara, Guadalcanal
- d. *Typhlina subocularis*  
Mt Austen, Guadalcanal
- f. *Candoia bibroni*  
Malaupaina, Olu Malau
- h. *Candoia carinata*  
Mbita'ama, Malaita



A



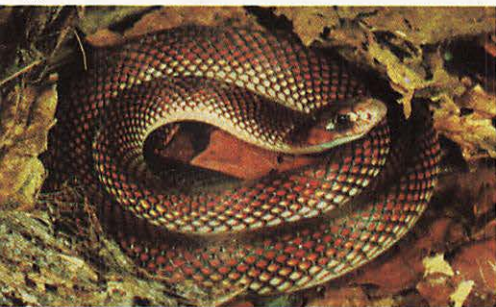
B



C



D



E



F



G



H

Plate 20

- a. *Acrochordus granulatus*  
Boromole, Nggela
- c. *Dendrelaphis calligaster*  
Boromole, Nggela
- e. *Salomonelaps par*  
Boromole, Nggela
- g. *Laticauda crockeri*  
Lake Te-Nggano, Rennell

- b. *Boiga irregularis*  
Mt Austen, Guadalcanal
- d. *Loveridgelaps elapoides*  
Boromole, Nggela
- f. *Laticauda colubrina*  
Tulagi
- h. *Laticauda laticaudata*  
Arosi, San Cristobal

*Description:* Average SVL 120mm, tail about 120% of SVL. Head small, snout short. Body somewhat elongated. Limbs short, just meeting when adpressed. Supranasals absent. Prefrontals usually in contact. A single anterior and posterior loreal. Frontal about 1.5x as long as wide, longer than its distance from the snout, in contact with the 1st and 2nd of 4 (rarely 5) supraoculars. Lower eyelid scaly. Interparietal a little reduced in size. No enlarged nuchal scales. Midbody scales in 33-38 rows. 15-20 lamellae under the 4th toe.

*Color:* Dorsally light to dark brown with irregular darker spots which are more distinct on the posterior body and laterally where they may form vague transverse bars. Ventrally creamy white to light yellow. The tail often has a fine peppering of grey spots laterally. The whole body has a strong metallic gloss.

*Ecology:* A rare and poorly known species. It lives in forests where it is largely diurnal though at times crepuscular. It forages for its insect food in the leaf litter on the forest floor. It shelters under fallen timber and other ground debris. On Nggela I have seen *woodfordi* take refuge down the burrows of land crabs and it is possible that it utilizes these presumably empty burrows as a normal nocturnal retreat.

### Genus *Tribolonotus* Duméril & Bibron

Small to moderate sized lizards. Lower eyelid scaly. No supranasals or prefrontals. The frontoparietals may be distinct or fused. The head shields are quite rugose with longitudinal ridges. The body scales are carinate or spinose. Limbs reasonably well developed, pentadactyl.

#### Key to Solomon Islands species of *Tribolonotus*

1. Enlarged vertebral scales in a double row . . . . . 2  
    Enlarged vertebral scales in a single row . . . . . *blanchardi*
2. Males with palmar pores. Average SVL less than 75mm . . . . . 3  
    Males without palmar pores. Average SVL more than 100mm . . . . .  
    . . . . . *ponceleti*
3. Enlarged vertebral scale rows contacting the parietal . . . . . *schmidti*  
    Enlarged vertebral scale rows not contacting the parietal . . . . .  
    . . . . . *pseudoponceleti*

#### *Tribolonotus blanchardi* Burt Plate 12d, 18e

*Distribution:* Bougainville, Choiseul, Guadalcanal, Nggela.

*Description:* Average SVL 35mm, tail about 160% of SVL. Head moderate, wedge-shaped, snout short. Body slender. Adpressed limbs overlap. Prefrontals absent. A single large loreal. Frontonasal large, longer than wide. Frontal reduced in size, smaller than the frontonasal. Four supraoculars. Lower eyelid scaly. A single frontoparietal. Interparietal and parietals fused into a single shield. Mental small, followed by a large postmental and 2 pairs of chinshields. Head scales rugose, multicarinate. A cluster of

enlarged spinose scales is present on each side of the head behind the parietal. Dorsal body scales small and strongly keeled. A single row of enlarged keeled vertebral scales runs from the neck to the base of the tail. An undulating row of enlarged scales is present along the sides of the body in a dorsolateral position. Ventrally with large keeled scales. A pair of enlarged keeled preanals is present. Males with palmar and plantar pores and abdominal glands. 21-25 lamellae under the 4th toe.

*Color:* Color and pattern quite variable. Dorsally light yellow to light or dark brown, this color usually confined to within the vertebral area bordered by the undulating dorsolateral scale rows mentioned above in the description of scalation. Other specimens have a series of yellowish or greenish paired blotches along each side of the vertebral scale row. There is often a light chevron shaped mark at the base of the tail. The lips are usually barred with black and whitish bands and the snout is often a light cream. The lateral and ventral coloration is mostly a uniform dark brown. The tail may be a uniform light or dark brown or it may be marked with broad light and dark bands.

*Ecology:* This species is quite common on Nggela at least, where it lives in very moist conditions in river valleys or under stones and piles of dead leaves and other debris in wet stream beds. On Bougainville it is essentially a montane lizard. I have seen *blanchardi* diurnally active on Nggela where it forages in and over debris at the sides of streams in heavily shaded areas in search of its food of small insects and their larvae. Although it generally moves fairly slowly, it is capable of bursts of rapid movement. If it is disturbed when it is sheltering under ground debris it may either remain motionless or dart into the surrounding litter. It is oviparous, laying a single egg at a time.

#### **Tribolonotus ponceleti Kinghorn**

*Distribution:* Bougainville, Shortlands. Although this species was described from a single specimen supposedly collected at Buin on Bougainville (Kinghorn 1937), Greer & Parker (1968a) express doubt as to whether it actually occurs on Bougainville due to its absence in extensive collections made on the island by Parker.

*Description:* Average SVL 120mm, tail about 100% of SVL. Head large, snout short and angular. Adpressed limbs overlap. Prefrontals absent. A single large loreal is present. Frontonasal quite large. Frontal a little longer than wide, shorter than its distance from the snout. Four supraoculars. Three supralabials, the 2nd very large. Lower eyelid scaly. Parietals and interparietal fused into a single shield. Mental small, followed by a larger postmental and 2 pairs of chinshields. All the head shields are rugose and multicarinate. Dorsal and caudal scales are all strongly spinose. A double row of enlarged keeled scales runs from the neck to the tail in a vertebral position. The ventral scales are enlarged and strongly keeled. Males with plantar pores and abdominal glands, without palmar pores. 26 lamellae under the 4th toe.

**Color:** Light brown dorsally, yellowish ventrally. The above description of scalation and color is based on the holotype (No 11459) in the Australian Museum.

**Ecology:** This is a rare lizard and virtually nothing is known of its habits. People in the Shortlands are familiar with it and have told me that they have seen it active in forest areas where it is largely crepuscular in its habits. It probably shelters under fallen timber and other ground debris.

**Tribolonotus pseudoponceleti Greer & Parker**

**Distribution:** Buka, Bougainville.

**Description:** Average SVL 50mm, tail about 120% of SVL. Head fairly large, wedge-shaped. Adpressed limbs overlap. Nostril in a single nasal. Prefrontals absent. Frontal smaller than the frontonasal. Four supraoculars. Lower eyelid scaly. Parietals and interparietal fused into a single shield. Head shields rugose and multicarinate. Body scales small and granular or spinose. A double row of enlarged keeled scales runs from a little anterior to the forelimbs to the base of the tail in a vertebral position. Ventrally with enlarged keeled scales. The tail is covered with keeled scales forming annuli. Two enlarged, keeled preanal scales are present. Males with palmar pores, both sexes with abdominal glands. 20-29 lamellae under the 4th toe.

**Color:** Dorsally brown. Laterally and ventrally a lighter brown. A lighter mottling is often present dorsally. Specimens from Buka are generally lighter in color than those from Bougainville (Greer & Parker 1968a).

**Ecology:** This species is common on Bougainville where it occurs from coastal regions up to 1200m elevation (Greer & Parker 1968a). Its habits are apparently quite similar to *T. schmidti* on Guadalcanal excepting that *pseudoponceleti* is oviparous, laying a single egg at a time.

**Tribolonotus schmidti Burt Plate 13a, 18f**

**Distribution:** Guadalcanal and several small offshore islands at its eastern end. Burt & Burt (1932) record this species from Bougainville although it almost certainly does not occur there; Burt & Burt's specimen is probably referable to *pseudoponceleti*.

**Description:** Average SVL 35mm, tail about 100% of SVL. Head moderate, wedge-shaped, snout short. Limbs moderate, meeting when adpressed. Nostril in a single large nasal. Prefrontals absent. A single large loreal. Frontal smaller than the frontonasal, shorter than its distance from the snout. Four supraoculars. Lower eyelid scaly. Frontoparietal wider than the frontal though shorter. Parietals and interparietal fused into a single shield. Mental large, followed by a pair of equally large postmentals. Head shields rugose, multicarinate. Dorsally the body is covered with small keeled or spinose scales interspersed with larger spinose scales that usually tend to form irregular longitudinal rows. A double row of enlarged keeled scales runs from the parietal to the tail. Tail covered with

large, heavily keeled scales. A pair of enlarged keeled preanals is present. Males with palmar and plantar pores and both sexes with abdominal glands. 15-25 lamellae under the 4th toe.

*Color:* Usually a uniform dark brown dorsally and laterally and ventrally light brown to dark reddish brown. On many specimens the mid-dorsal area is lighter in color than the rest of the dorsum. A light chevron mark is sometimes present at the base of the tail and in most specimens the lips are barred with a few narrow white streaks.

*Ecology:* A common species. It is cryptozoic in habit and generally lives in moist conditions under fallen timber in forest areas. One large fallen tree may shelter several individuals. When cover is removed they may remain motionless or dart for shelter in the surrounding leaf litter. This lizard is quite dependant upon cool, moist conditions and in direct sunlight, or if held in the hand for too long, will succumb to overheating. I have never seen an individual moving in the open of its own accord. It is probable that it does not leave its shelter except for breeding or if extended dry periods compel it to seek moister surroundings. Captive *schmidti* sleep at night so that like *T. blanchardi*, it is probably mostly diurnally active. This lizard feeds mainly on small insects and their larvae; captive specimens feed readily on termites. Unlike other members of its genus which are oviparous, *schmidti* gives birth to a single live young.

#### Family VARANIDAE

A family of moderate to very large lizards containing about 30 species and occurring largely in tropical areas though some are to be found in temperate climates. They are distributed from Africa through Asia to New Guinea and some of the islands of the W. Pacific and to Australia where the majority of species occur. In Australia they are called goannas, elsewhere they are usually termed monitor lizards. The head is fairly long and slender and the tail is long and laterally compressed in many species. The body is covered with small juxtaposed scales. The limbs are well developed and strongly clawed and the tongue is long and bifid, retractile into a sheath at its base. Monitor lizards are diurnal and occupy a variety of habitats from deserts to forests and some are aquatic to a large extent. They are voracious predators, feeding on a variety of vertebrates and invertebrates. All species are oviparous.

#### Genus *Varanus* Merrem

See family for description.

*Varanus indicus* (Daudin) Plate 13b, 18g, h

*Distribution:* Caroline, Marshall and Mariana Is., Timor, New Guinea, N. Australia, Torres Strait, Solomon Is. Solomons: Bougainville, Shortlands, Rendova, Isabel, Russell Is., Guadalcanal, Nggela, Savo, Malaita,

Rennell, San Cristobal, Ugi, Olu Malau, Kolombangara, Gizo. Mertens (1942) records an endemic subspecies *spinulosus* from San Jorge Is. near Isabel.

*Description:* Average SVL 500mm, tail about 150% of SVL. Head large, snout elongate. Canthus rostralis distinct. Tongue long and bifid. The head is covered with irregular polygonal scales which are more uniform on the supraocular region where they are transversely enlarged. The nostril is situated on the side of the snout, about 2/3 the distance from the eye to the tip of the snout. The eye is large and situated midway between the nostril and the ear. Body scales juxtaposed and somewhat conical dorsally. Ventrally the scales are smooth and rectangular. The caudal scales are carinate and rectangular. The tail is strongly compressed laterally with a distinct caudal keel. The limbs are well developed and strongly clawed.

*Color:* Black dorsally with small yellow spots arranged evenly over the upper surfaces of the body. On the tail these spots are often arranged into ill-defined transverse bars. The tip of the snout and the lips are an orange-pink. Ventrally cream to yellow.

*Ecology:* This lizard is uncommon on most of the larger islands, although on many of the smaller islands such as the Olu Malau group, very large populations occur. It is an active, diurnal lizard. Usually found in the vicinity of the sea or mangrove swamps where it forages for its food which is made up of crabs (grapsoid crabs in the littoral zone are a major part of its diet), smaller lizards and snakes, rats, and occasionally birds and their eggs. It will also dig up the nests of turtles to feed on the eggs. Although it is largely terrestrial in its feeding habits, it is a very efficient climber and invariably takes shelter up the nearest tree when alarmed on the ground. Individuals living around the shore of Lake Te-Nggano on Rennell are mostly aquatic. *Indicus* prefers semi-open areas to thick forests and is a common inhabitant of coconut plantations on the smaller islands. The eggs are laid under decaying vegetation on the ground or in the rotting timber of dead trees on or above the ground. The hatchling lizards feed upon insects and small skinks.

## SNAKES, Order *SQUAMATA* Suborder *SERPENTES*

### Key to families of Solomon Islands snakes

1. Tail laterally compressed, paddle-shaped . . . . . *Hydrophiidae*  
Tail more or less round in cross section . . . . . 2
2. Body scales smooth, or if keeled, then ventral scales distinct . . . . . 3  
Body scales keeled or spinose. Distinct ventral scales absent . . . . .  
. . . . . *Acrochordidae*
3. Body scales smooth . . . . . 4  
Body scales keeled . . . . . *Boidae*
4. Eyes well developed. Ventral scales distinct (Fig. 7) . . . . . 5  
Eyes vestigial, only discernible as small dark spots on the head (Fig. 8). Distinct ventral scales absent . . . . . *Typhlopiidae*



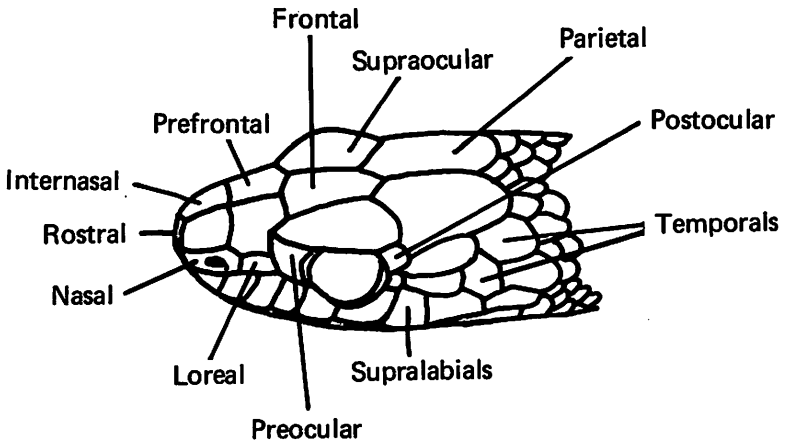


Fig. 5. Dorsolateral aspect of the head of a colubrid snake

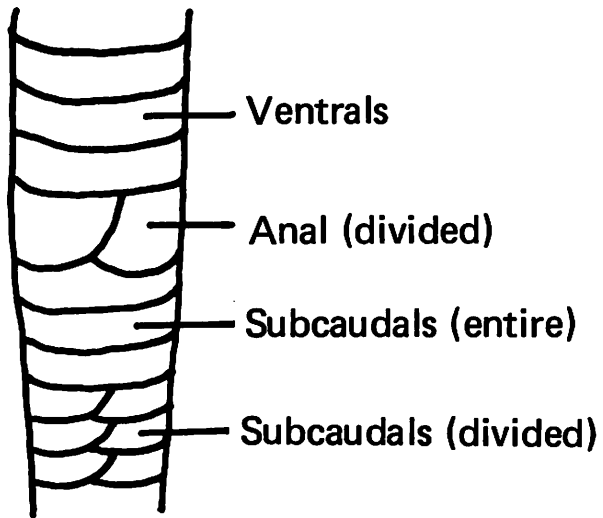


Fig. 6. Scalation in the region of the vent of a snake

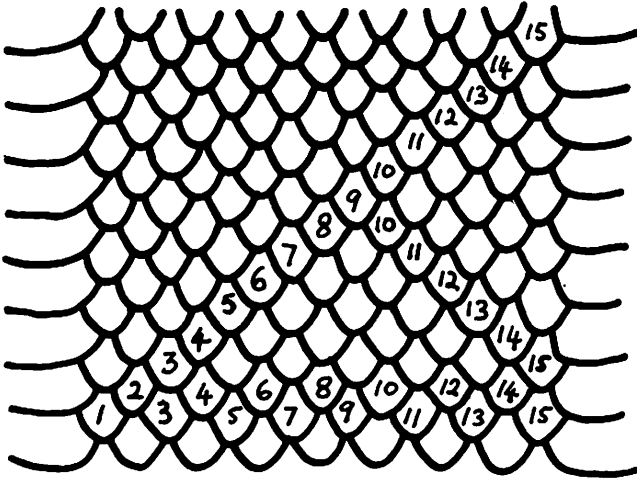


Fig. 7. Methods of counting scale rows

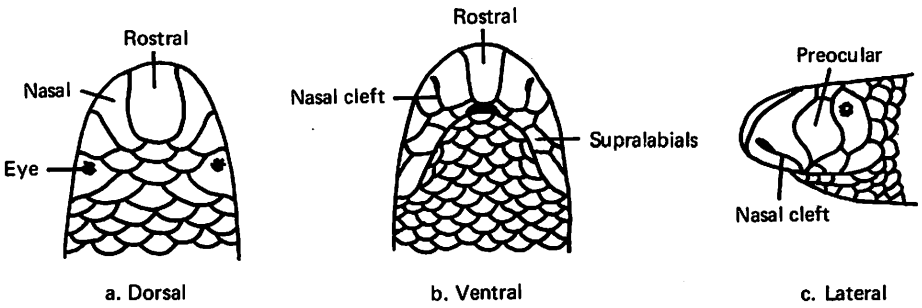


Fig. 8. Head of a typhlop snake

5. Loreal scales present. Diameter of the eye greater than its distance from the mouth (Fig. 5) . . . . . *Colubridae*  
 Loreal scales absent. Diameter of the eye the same as or less than its distance from the mouth . . . . . *Elapidae*

### Family TYPHLOPIDAE

A family of small, nocturnal burrowing snakes containing nearly 200 species and occurring widely in tropical and temperate regions around the world. All are alike in appearance and ecology. The body scales are very smooth and glossy and the tail is short with a terminal spine that is supposedly used as an aid to progression through the ground (Worrell 1963). The head is not distinct from the neck and the eyes are vestigial. The mouth is situated well under the head. They have no venom apparatus. They are all oviparous and feed on termites and insect larvae. In the Solomons they mostly live in forested areas in moist conditions in and under rotting fallen timber and in loose soil. They are occasionally found moving over the ground at night. Because of their secretive habits, these small snakes are rarely encountered and their relative abundance in the Solomons is difficult to determine.

### Genus *Typhlina* Wagler

The more general features of this genus are given in the familial description. *Typhlina* is essentially distinguished from other genera within its family by differences in hemipenial morphology.

Because of their small size and few external features that serve to distinguish between species, *Typhlina* are often difficult to identify to species level. The following key will serve to identify most Solomons *Typhlina*, though a microscope is necessary to observe head scalation and check scale counts. Without a microscope, the illustrations will serve to identify most species with reasonable accuracy.

#### Key to Solomon Islands species of *Typhlina*

1. Midbody scales in 22 or fewer rows . . . . . 2  
 Midbody scales in more than 22 rows . . . . . *subocularis*
2. Nasal cleft contacting the preocular . . . . . *bramina*  
 Nasal cleft not contacting the preocular . . . . . 3
3. Nasal cleft contacting the 1st supralabial . . . . . *angusticeps*  
 Nasal cleft contacting the 2nd supralabial . . . . . 4
4. Midbody scales in 20 or more rows . . . . . 5  
 Midbody scales in 18 rows . . . . . *affinis*
5. Snout rounded. The rostral nearly reaching level of eyes, about 1/3 the width of the head . . . . . *flaviventer*  
 Snout somewhat depressed. The rostral nearly reaching level of eyes, about 1/4 of the width of the head . . . . . *willeyi*

**Typhlina affinis** (Boulenger)

*Distribution:* This species is known in the Solomons from a single specimen collected at "Keri Keri" (?=Kira Kira) on San Cristobal and described as *Typhlops cumingii mansuetus* by Barbour (1921). This species is widely distributed in N. Australia.

*Description:* Average total length about 150mm. Snout short and bluntly rounded from above. Rostral very wide, almost 1/2 the width of the head. The nasal is large and completely divided by a cleft which contacts the 2nd supralabial. The eyes are particularly small. Midbody scales in 18 rows.

*Color:* Dark brown dorsally. Head and mouth yellowish. Ventrally yellowish or pinkish.

*Ecology:* See familial description for ecological remarks.

**Typhlina angusticeps** (Peters) Plate 19a

*Distribution:* Solomon Is., New Caledonia. In the Solomons: Guadalcanal, Malaita, Rennell, San Cristobal, Olu Malau.

*Description:* Average total length 350mm. Body very long and slender. Snout prominent, slightly hooked. Rostral with a distinct transverse keel. The nasal cleft contacts the 1st supralabial. Midbody scales in 20 rows.

*Color:* Light or dark brown dorsally, slightly paler ventrally. The mouth and vent areas are often whitish.

*Ecology:* See familial description for some general ecological remarks. I once collected a specimen of this snake in the fronds of a small palm about 4m above the ground in the forest on Guadalcanal at night. The snake appeared to be foraging but the possibility that it had been dropped by a nocturnal bird of prey cannot be discounted. Certainly such arboreal activity is contrary to all that is known of the habits of *Typhlina*.

**Typhlina bramina** (Daudin) Plate 13c, 19b

*Distribution:* Africa, India, Ceylon, islands of Indian Ocean, S. China, SE Asia, Philippines, New Guinea, the vicinity of Darwin in N. Australia, Solomon Is., Micronesia, Hawaii, Mexico. Solomons: Bougainville, Guadalcanal.

*Description:* Average total length 130mm. Snout rounded. Rostral without a keel, about 1/4 to 1/3 the width of the head, wider dorsally than at the snout, not reaching the level of the eyes. Nasal cleft dividing the nasal, contacting the preocular. Midbody scales in 20 rows.

*Color:* Dark purplish brown above, lighter ventrally. There are rows of whitish glands in the sutures between the head scales.

*Ecology:* This widespread species generally lives in close association with man over much of its range and has probably been introduced by man to many areas where it occurs. It was possibly introduced into the Solomons during World War II when it could well have been secreted as eggs or mature specimens amongst the large amounts of military equipment brought into these islands at that time. All known specimens are

female; the species presumably reproducing by parthenogenesis. See familial description for more general ecological remarks.

**Typhlina flaviventer (Peters) Plate 13d, 19c**

*Distribution:* New Guinea, New Britain, Solomon Is., Fiji. In the Solomons: Bougainville, Shortlands, Ranongga, Kolombangara, New Georgia, Isabel, Guadalcanal, Nggela, Malaita, San Cristobal, Olu Malau.

*Description:* Average total length 170mm, grows to over 200mm. Snout rounded. Rostral without a keel, about 1/3 the width of the head, nearly reaching the level of the eyes. The nostril is in a large nasal, the nasals extending beyond the level of the rostral. Nasal cleft not dividing the nasal, in contact with the 2nd supralabial. Midbody scales in 20-22 rows.

*Color:* Light to dark brown dorsally. Yellowish brown ventrally.

*Ecology:* This species appears to be more common than other typhloids in the Solomons. See familial description for ecological remarks.

**Typhlina subocularis (Waite) Plate 19d**

*Distribution:* New Ireland, New Britain, Bismarck Archipelago, Solomon Is. Solomons: Bougainville, New Georgia, Guadalcanal, Nggela, Malaita.

*Description:* Average total length about 270mm. The anterior portion of the body is quite robust. Snout distinctly wedge-shaped. The rostral is less than 1/3 the width of the head, not reaching the level of the eyes. Nasal large, not usually divided by the nasal cleft which contacts the 2nd (very rarely the 1st) supralabial. Midbody scales in 26-36 rows.

*Color:* Pinkish brown to red above. Yellowish ventrally. Edges of scales are usually pale, giving an overall reticulated pattern.

*Ecology:* A fairly common species. See familial description for ecological remarks.

**Typhlina willeyi (Boulenger) Plate 19e**

*Distribution:* Loyalty Is., Solomon Is. Solomons: Guadalcanal.

*Description:* Average total length about 140mm. Snout depressed, wedge-shaped in profile, rounded when viewed from above. Rostral almost reaching the level of the eyes, about 1/4 the width of the head. Nasal almost divided by a cleft which contacts the 2nd supralabial. Midbody scales in 20-22 rows.

*Color:* Dark brown above. Ventrally light brown. There are often pale yellowish areas around the snout and underside of the tail.

*Ecology:* A very rare species. See familial description for ecological remarks.

**Family BOIDAE**

This family comprises the boas (subfamily Boinae) and the pythons (subfamily Pythoninae) of which only a single genus of the former is

found in the Solomons. Generally though, boas are New World snakes and pythons are found in the Old World and Australasia. Boid snakes are essentially tropical though some species occur in temperate regions. Although some boids are fairly small, the family includes some of the largest snakes in the world such as the S. American Anaconda and the giant Reticulated Python of SE Asia. They are all non-venomous and kill their prey by constriction. They feed on mammals, birds and other reptiles. Most species are nocturnal though some will move about during the day. According to species, they are either arboreal, terrestrial or partly aquatic. A pair of small claws or "spurs" are present on either side of the vent, these are the vestigial remains of the hindlimbs. Boas give birth to live young while pythons lay eggs.

### Genus *Candoia* Gray

Head distinct from the neck. Snout obliquely truncate. Canthus rostralis prominent. Body slightly compressed. All the dorsal body scales are strongly carinate. Subcaudals entire.

#### Key to Solomon Islands species of *Candoia*

1. Supralabials separated from the eye by subocular scales . . . . . 2  
Supralabials entering the eye . . . . . *carinata*
2. Body stout. Keels on body scales forming oblique rows . . . . . *aspera*  
Body fairly slender. Keels on body scales parallel to the long axis of the body . . . . . *bironi*

#### *Candoia aspera* (Günther)

*Distribution:* Moluccas, New Guinea and adjacent island archipelagos, Solomon Is. In the Solomons: Bougainville.

Although Kinghorn (1928) records a specimen of *aspera* from Bougainville, Fred Parker (pers. comm.) records no specimens of this species in his very extensive Bougainville collections and expresses doubt that *aspera* does in fact occur on Bougainville.

*Description:* Average total length about 750mm. Head large, distinct from the neck. Body short, stout. Rostral wider than deep, not visible from above. Eye separated from supralabials by a row of suboculars. Head covered with small, irregular carinate scales. Body scales strongly carinate, the keels forming oblique rows. Midbody scales in 33-39 rows. Ventrals 131-153. Anal entire. Subcaudals 15-21, entire.

*Color:* Dorsal ground color reddish brown with a series of large dark brown blotches edged with black. Irregular lines are sometimes present on the body. Ventrally yellowish, with or without dark spots.

*Ecology:* A terrestrial species, usually found under or amongst leaf litter and other ground debris. It feeds upon lizards and small mammals such as rats and small ground-dwelling birds. It gives birth to live young.

**Candoia bibroni** (Hombron & Jacquinot) Plate 14a, 19f

Stimson (1969) refers the form described below to the subspecies *australis*.

*Distribution:* (for the subspecies *australis*) Ceram, Bismarck Archipelago, Woodlark I., Solomon Is., New Hebrides, Loyalty Is., Tokelau, Rotuma, Samoa. Solomons: Rennell, San Cristobal, Ugi, Olu Malau, Santa Ana, Santa Cruz, Reef Is., Vanikoro.

*Description:* Average total length 1.25m, sometimes reaches 2m. Head large, distinct from the neck, snout obliquely truncate. Body fairly slender. Rostral wider than deep, not visible from above. The head is covered with small scales which possess a short, undeveloped keel. Diameter of eye greater than its distance from mouth. 10-15 supralabials separated from the eye by a row of suboculars. Body scales keeled, in 32-42 rows at midbody. 211-267 ventrals. Anal entire. 40-66 subcaudals, mostly entire though 1 or 2 may be divided.

*Color:* The coloration is quite variable. The commonest color form is a grey ground color above with irregular lighter and darker blotches, sometimes forming a variegated pattern. This patterning is usually more distinct on the posterior body and tail. Other color forms are brick red with the same markings as above while other specimens may be dull or bright yellow with or without other markings. Ventrally cream to white with or without darker markings.

*Ecology:* This is an arboreal species and in some areas such as the Reef Is. where it is abundant, it can be found in mangroves. Elsewhere it is a dweller in forests and sometimes in cultivated areas. Mainly nocturnal, it occasionally moves about during the day. Food consists of lizards and mammals such as rats and flying foxes and also birds. It is a slow moving snake though aggressive when provoked, striking repeatedly if any attempt is made to come near it. It gives birth to up to 20 or more live young.

**Candoia carinata** (Schneider) Plate 14b, 19g, h

Stimson (1969) refers the form described below to the subspecies *paulsoni*.

*Distribution:* (for the subspecies *paulsoni*) Throughout virtually all islands of Solomons and Santa Cruz group. It occurs on Rennell and Bellona but not on Ontong Java.

*Description:* Average total length around 750mm, it grows to over 1m. Head large, distinct from the neck, snout obliquely truncate. Canthus rostralis angular. Body stout. Tail short and prehensile. Rostral wider than deep, not visible from above. The head is covered with small keeled or partially keeled scales. Eye moderately large with a vertically elliptical pupil. 10-14 supralabials of which 2 enter the eye. Body scales are strongly keeled, in 31-43 rows at midbody. 160-216 ventrals. Anal entire. 35-56 subcaudals, all entire.

*Color:* The basic color may be light cream or brown, grey, brick red to dark brown above with darker zig-zag patterning along the vertebral line

and a variegated pattern laterally. Patches of irregular red and white blotches are present at the edge of the ventral area. Ventrally grey to white, usually with a peppering of grey, red and black spots. The subcaudal area is often patterned with a vague black and white check.

*Ecology:* This widespread species is probably the most abundant of the snakes in the Solomons. It occurs in a variety of habitats from forests to cultivated areas and human habitations. It sometimes coils itself up in the open, relying on its cryptic coloration for protection. Mainly nocturnal, it occasionally moves about during the day. It is basically terrestrial though it is an efficient climber and sometimes lives in hollows in trees. On the ground it lives among any suitable cover from leaf litter to rock piles, grass tussocks and under fallen timber. When young, it feeds upon small lizards and frogs, larger individuals feed upon large lizards, rats and birds. I have found *carinata* deep within limestone caves where it was presumably feeding on frogs and small bats that also occurred there. This snake is rather docile but will strike repeatedly if provoked. Up to 20 or more live young are produced at a time.

#### Family ACROCHORDIDAE

Currently a monogeneric family containing 2 species. This family is distributed in tropical regions from SE Asia and the Indo-Australian Archipelago to Papua New Guinea, Australia and the Solomons. These non-venomous snakes are totally aquatic and occur in marine, brackish and freshwater conditions. Their skin is loose and baggy and covered with very small spinose scales which gives rise to their common name of file snakes. They have no enlarged ventral or subcaudal scales. They feed on a variety of freshwater and marine fish. Both species give birth to live young.

#### Genus *Acrochordus* Hornstedt

Head covered with irregular juxtaposed scales. Body scales small and spinose. Enlarged ventrals absent. Tail short and prehensile. Head scarcely distinct from the neck. Body stout and a little compressed. Eyes minute. Nostrils on the top of the snout, close together and valvular.

*Acrochordus granulatus* (Schneider) Plate 15a, 20a

*Distribution:* SE Asia, Philippines, New Guinea and adjacent archipelagos, N. Australia, Solomon Is. Solomons: Bougainville, Isabel, Nggela, Malaita. Probably occurs on other islands of the group.

*Description:* Average total length about 700mm. Head small, scarcely distinct from neck. Eyes minute. Nostrils on the top of the snout, valvular. Body covered with loose baggy skin with very small spinose scales giving a file-like appearance and texture. 85-108 scale rows at midbody. No distinct ventral or subcaudal scales. A distinct longitudinal fold is present midventrally.



*Color:* Dark grey to black with numerous pale, broad vertical bars laterally. In juveniles these bars are continuous on the dorsum.

*Ecology:* This common nocturnal species is totally aquatic and occurs in marine or brackish conditions. It lives in river estuaries, mangrove swamps and reef flats. It is particularly abundant in mangrove areas in Mbolli Passage on Nggela. Small fish such as blennies, gobies and mudskippers form most of its diet. When feeding, it wraps itself around the fish to prevent its escape and swallows it alive. It is not an active species, often lying motionless on the bottom in shallow water for long periods. The young are produced alive.

## Family COLUBRIDAE

This very large family comprises many diverse forms of snakes and includes the solid-toothed non-venomous snakes and the rear-fanged venomous snakes. The majority of snakes throughout the world belong to this family though in the Australia – New Guinea – Pacific region they are poorly represented. Colubrid snakes occur in tropical and temperate regions all over the world. Generally they tend to be slender, agile snakes, either terrestrial or arboreal and some are aquatic to a large extent. They may be either diurnal or nocturnal. They feed on a variety of vertebrates such as amphibians, other reptiles, birds and mammals. The aquatic species feed mainly on fish.

### Key to Solomon Islands species of colubrid snakes

Midbody scales in 13 rows . . . . . *Dendrelaphis calligaster*  
Midbody scales in 17-23 (usually 21) rows . . . . . *Boiga irregularis*

### Genus *Boiga* Fitzinger

Rear-fanged venomous land snakes. Head large, very distinct from neck. Eye large with a vertically elliptic pupil. Anal entire. Loreal scale present.

*Boiga irregularis* (Merrem) Plate 20b

*Distribution:* New Guinea and adjacent archipelagos, Australia, Solomon Is. In the Solomons: Bougainville, Shortlands, Mono, Ranongga, Isabel, Guadalcanal, Nggela, Malaita.

*Description:* Average total length about 1.5m, grows to over 2m. Head very large, distinct from neck. Body slender, laterally compressed. Rostral wider than deep, visible from above. Usually 1 (sometimes 2) preocular which narrowly contacts the frontal or is narrowly separated from it. Two postoculars. The eye is very large, its diameter greater than its distance from the mouth. Frontal slightly longer than wide, as long as its distance from the snout. 8-10 supralabials. Midbody scales in 17-23 (usually 21) rows. 217-270 ventrals. Anal entire. 99-125 subcaudals, all divided.

*Color:* Dorsally light brown to khaki with darker indistinct wavy transverse bands which are more distinct on the anterior body. Ventrally yellow or greenish yellow. The iris is usually orange-yellow.

*Ecology:* This uncommon species is nocturnal and arboreal though it often forages on the ground at night. It shelters in hollows in trees and in the crowns of various palms during the day and sometimes can be found in the ceilings of houses. It is a fairly aggressive species, striking repeatedly if provoked. Although it is rear-fanged and venomous, its venom is not very toxic, though no doubt sufficient to overcome the lizards (particularly geckos), small mammals and birds that it feeds upon. It will also eat the eggs of birds and domestic chickens. It is oviparous.

### Genus *Dendrelaphis* Boulenger

Solid-toothed non-venomous snakes. Head elongate, distinct from neck. Eye large with a round pupil. Body slender. Midbody scales in 13-15 rows. Loreal scale present.

#### *Dendrelaphis calligaster* (Günther) Plate 20c

*Distribution:* N. Australia, New Guinea, Trobriand Is., Solomon Is. Loveridge (1948) refers the Solomons form to the subspecies *salomonis*, this form occurring on Bougainville, Shortlands, Fauro, Choiseul, Vella Lavella, Gizo, Ranongga, Rendova, Kolombangara, New Georgia, Isabel, Russell Is., Guadalcanal, Nggela, Malaita, San Cristobal, Ugi, Olu Malau, Santa Ana, Santa Cruz.

*Description:* Average total length 1m. Head elongate, distinct from the neck. Body very slender. Canthus rostralis rounded. Rostral wider than deep, visible from above. Nasal usually divided. Frontal bell-shaped, about 2x as long as wide, as long as its distance from snout. Eye large, its diameter greater than its distance from mouth. Temporals 1+2 or 2+2. 7-9 supralabials. Midbody scales in 13 rows. 171-211 ventrals. Anal entire. 124-166 subcaudals, all divided.

*Color:* Dorsally greenish grey to light or dark brown. The anterior 1/3 of the body is often reddish and in many individuals indistinct vertical darker bars are present on the anterior body. A black streak runs from the snout, through the eye and onto the neck. The labials and the gular region are invariably a pale yellow. Ventrally grey, grey-green, yellow-green, yellow or cream.

*Ecology:* A very active, swift moving diurnal snake. It is quite common and occurs in both forests and cultivated areas where it is both terrestrial and arboreal in its habits. It preys mainly on small lizards and frogs. The prey is eaten alive. This species is oviparous.



*Ecology:* This very rare and poorly known endemic species is not usually found outside the forest areas where it dwells, usually in the vicinity of streams. It is cryptozoic, sheltering under leaf litter and fallen timber and tends to be crepuscular or nocturnal. It feeds on a variety of small lizards and also on *Typhlina* and probably also on frogs. The toxicity of its venom is unknown but its bite could be regarded as potentially dangerous to humans. It is an inoffensive snake and rarely makes an attempt to bite, even when handled. Details of reproduction in *Loveridge-laps* are not known.

### Genus *Parapistocalamus* Roux

Two maxillary fangs. No posterior maxillary teeth. The head is not distinct from the neck. The diameter of the eye is less than its distance from the mouth. The nostril between 2 nasals. The body scales are in 15 rows. Anal entire or divided. Subcaudals all divided.

#### *Parapistocalamus hedigeri* Roux

*Distribution:* Bougainville.

*Description:* Average total length around 300mm. Head not distinct from the neck. Rostral broader than deep, visible from above. Nostril in a divided nasal. Frontal slightly longer than wide, longer than its distance from the snout. A single preocular may be present or absent. A single postocular. Temporals 1+1 or 1+2. Midbody scales in 15 rows. 159-169 ventrals. Anal entire or divided. 32-35 subcaudals, all divided.

*Color:* (in preservative) Dorsally dark brown. Lighter laterally. The head is colored similarly to the dorsum though the parietals are often light in color. Ventrally yellow to light brown.

*Ecology:* A rare species and very little is known of its habits. Williams & Parker (1964) report it as living "... in and under rotten logs and leaf mould."

### Genus *Salomonelaps* McDowell

A monotypic genus. Head slightly depressed, distinct from the neck. Eye moderate. Nasal single or divided. Midbody scales in 15-17 rows. Anal divided.

#### *Salomonelaps par* (Boulenger) Plate 15c, 20e

*Distribution:* Buka, Shortlands, Fauro, Vella lavella, Simbo, Gizo, Ranongga, Kolombangara, New Georgia, Rendova, Isabel, Guadalcanal, Nggela, Malaita. Specimens of this snake occurring in the W. Solomons have, in the past, been regarded as a distinct species, "*Denisonia woodfordi*". McDowell (1969) however, does not accept the validity of *woodfordi*.

*Description:* Average total length about 750mm, grows to over 1m. Head moderate, distinct from neck. Body a little stout. Rostral wider than deep, visible from above. Nasal usually divided, though sometimes single, but at least always grooved. A single preocular and 2 postoculars. Frontal as wide as long. Seven supralabials, 3rd and 4th entering eye. Temporals 1+2. Midbody scales in 15-17 rows. 158-180 ventrals. Anal divided. 38-59 subcaudals, may be entire or divided or partly entire and partly divided.

*Color:* Dorsally reddish brown to dark brown to almost black. Darker transverse bands may be distinct, indistinct or absent. In some individuals the scales have black borders resulting in an overall reticulated pattern. The head, and particularly the snout, are lighter in color than the dorsum. Ventrally creamy white.

*Ecology:* A reasonably common species. It is mainly diurnal and quite active. Found in forest areas, usually in the vicinity of streams where it forages for its food of small frogs and lizards. The frogs of the genera *Ceratobatrachus* and *Platymantis* form a large part of the diet of specimens on Guadalcanal and Nggela. It also feeds on *Typhlina*. When provoked, this snake will flatten its neck and anterior body, hissing loudly. A chewing movement of the jaws, characteristic of many elapids, may also occur. It is not a particularly aggressive species however and rarely attempts to bite. The toxicity of its venom is unknown but could be regarded as potentially dangerous to humans though people I have spoken to on Nggela where *Salomonelaps* is quite common, have no knowledge of any human fatalities as a result of the rare bites attributed to this snake. Details of reproduction in *Salomonelaps* are unknown.

#### Family HYDROPHIIDAE

A family of venomous sea snakes containing about 50 species. These snakes are inhabitants of the tropical and subtropical Indian and Pacific Oceans, though one species, *Pelamis platurus*, enters temperature waters. Sea snakes are descended from the elapid snakes and are closely related to them. McDowell regards them as a subfamily (Hydrophiinae) of the Elapidae because of their close relationship to that family. The fangs of sea snakes are situated at the front of the maxillary bone. The nostrils are valvular and the tail is paddle-shaped as an adaptation to an aquatic existence. They feed on a variety of marine fish. With the exception of the snakes of the genus *Laticauda* which lay eggs on land, all the sea snakes give birth to live young.

#### Key to genera of Solomon Islands sea snakes

1. Ventral scales more than 3x as wide as surrounding body scales . . . . .  
     . . . . . *Laticauda*
2. Ventral scales only slightly wider than surrounding body scales . . . 2
2. Mental groove present. Head normal, not elongate. Body more or less  
     distinctly banded . . . . . *Hydrophis*

Mental groove absent. Head elongated. No dark transverse banding on the body . . . . . *Pelamis*

### Genus *Hydrophis* Latreille

Head shields enlarged, regular. Mental groove present. The ventrals are much reduced in size. Four or more maxillary teeth behind the fang.

A key is not given here for the species of *Hydrophis*. This is because there is some doubt as to the correct identification of some of the specimens from the Solomons (see species accounts).

#### *Hydrophis belcheri* (Gray)

*Distribution:* Philippines, Celebes, New Guinea, Solomon Is., Gilbert Is., Fiji. Known in the Solomons from a single specimen collected off Malaita. This specimen was originally referred to *Hydrophis fasciatus atriceps* by Slevin (1934). Drs Brown and Leviton of the California Academy of Sciences examined this specimen at my request and have informed me that they believe it is an example of *belcheri*.

*Description:* The following is a description of the specimen (CAS 72035) forwarded to me by Brown. "Total length of specimen 640mm; posterior 3/4 of body and tail strongly compressed laterally; head small, not distinct from neck; rostral obtusely pointed dorsally, slightly broader than deep; frontal about 1.5x as long as broad; its length about 2/3 the length of the parietals and nearly as long as its distance from the rostral; eye small, its diameter about 1.25x its distance from the mouth and slightly less than its distance from the nostril, one pre- and 2 postoculars; a single, large anterior temporal; 6 upper labials, 3rd and 4th entering the eye; 7 lower labials with 4 small scales at the oral margin above 3rd, 4th and 5th; 29 scales on the neck; 36 on the body at midbody and at the point of greatest depth, pointed posteriorly and marked by a single keel; 335 ventrals each marked by 2 keels; preanals enlarged.

*Color:* (in preservative) A pattern of alternating, complete, dark brown and dirty white, transverse bands; the bands of about equal breadth ventrally but the dark bands broader dorsally; 29 dark bands between the head and the tail."

*Ecology:* Snakes of the genus *Hydrophis* appear to be quite rare in the Solomons. The few that I have seen have been in deeper water over a sandy, rather than a coral bottom and usually close to the mouths of large rivers. Their habits are poorly known, they probably feed upon eels and other small fish.

#### *Hydrophis cyanocinctus* Daudin

*Distribution:* Persian Gulf, SE Asia, Japan, Indo-Australian Archipelago. In the Solomons known from a single specimen collected off Guadalcanal in 1945. McDowell and Cogger (pers. comm's) express doubt as to the correct identification of this specimen. On the basis of Tanner's (1951)

description, McDowell believes it is referable to another species, possibly *Hydrophis melanocephalus*.

*Description:* The following is Tanner's description of the specimen (Brigham Young University No. 7861).

"Rostral broader than deep with marginal grooves; nasal shorter than the frontal, twice as long as the suture between the prefrontals; prefrontals in contact with 2nd supralabial; 1 preocular; 2 postoculars; temporals 3 and 1; 8 upper labials, 2nd largest, 3rd, 4th and 5th entering the eye; infralabials 10 and 9, both pair of chin shields in contact; body scale rows 27 anterior, 37 at midbody, 33 posterior near anus; anals 2 pairs; gastrosteges 334; urosteges 43; scales smooth and sub-imbricate. Color of preserved specimen black above with 47 light bands extending from the dark back to the ventral surface. A single row of larger black gastrostege scales separates the light bands. The head and chin are light colored. The tail for the length of 22 scales is black. Total length is 1028 (927+101)mm."

*Ecology:* Poorly known, probably feeds upon eels and other small fish.

### **Hydrophis ornatus (Gray)**

*Distribution:* Indian and W. Pacific Oceans. In Solomons known from specimens collected off Guadalcanal and Malaita.

*Description:* Average total length around 1m. Body quite stout and not noticeably elongate. Head moderate. The tail is strongly compressed laterally. A single preocular and 2 or 3 postoculars. The frontal is about as long as its distance from the snout. Seven or 8 supralabials, the 3rd and 4th entering the eye. Midbody scales in 33-45 rows in males and 39-55 in females. The body scales are subimbricate or juxtaposed. 209-260 ventrals in males, 236-312 in females, the ventrals about 2 x as wide as the surrounding body scales.

*Color:* Pale grey to dark grey above with a series of 30-60 dark transverse bars or blotches. A series of dark-edged ocellate markings is present laterally. The lower 1/2 of the body and the ventral area are yellowish to white.

*Ecology:* Poorly known, probably feeds upon eels and other small fish.

### **Genus Laticauda Laurenti**

Head shields symmetrical. Ventrals distinct. Nostrils situated laterally. Tail laterally compressed. All species are oviparous. Most species are marked with a distinctive dark and light banded pattern. McDowell regards this genus as aberrant elapids rather than true sea snakes.

#### **Key to Solomon Islands species of Laticauda**

1. Body distinctly banded. Midbody scales in 21 or more rows. An azygous prefrontal almost always present . . . . . *colubrina*

- Banding on the body distinct, indistinct or absent. Midbody scales in 19-21 rows. No azygous prefrontal . . . . . 2
2. Body melanotic, banding varies from reasonably distinct to absent. Midbody scales in 19-21 rows. Only found in Lake Te-Nggano, Rennell . . . . . *crockeri*
- Body not melanotic, distinctly banded. Midbody scales in 19 rows. Not found in Lake Te-Nggano, Rennell . . . . . *laticaudata*

***Laticauda colubrina* (Schneider) Plate 20f**

*Distribution:* E. Indian and W. Pacific Oceans.

*Description:* Average total length about 800mm. In Lake Te-Nggano on Rennell these snakes grow to over 1.5m. Head small, scarcely distinct from the neck. Body more or less round in cross section. Tail laterally compressed, paddle-shaped. Nostril in a lateral position. An azygous prefrontal is almost always present between the prefrontals. A single preocular, 2 postoculars. The frontal is much longer than its distance from the snout. 7-8 supralabials, the 3rd and 4th entering the eye. Midbody scales in 21-25 rows. Ventrals well developed, 213-245. Anal divided. 37-47 subcaudals in males, 27-35 in females, all divided.

*Color:* Light or dark blue-grey above with 20-65 black bands of more or less uniform thickness or narrowing ventrally. Some or all of these bands may be incomplete ventrally. The head is black and the snout yellow, this yellow color extending back along the upper lip to the temporal region. Ventrally white, cream or light yellow.

*Ecology:* A relatively common species. It is not as totally aquatic as other members of its family, occasionally coming ashore and sheltering in beach debris. It also lays its eggs ashore, *Laticauda* being the only genus of sea snakes to lay eggs. In Lake Te-Nggano on Rennell, *colubrina* often congregates in large numbers in hollows in limestone rock on the small islets in the lake. This snake also enters tidal pools to forage. It is both diurnal and nocturnal and tends to frequent shallow reefs and estuaries, particularly in areas with a rocky shoreline. Fish form the major part of its diet, especially those of the genus *Gobiodon* that shelter in *Acropora* coral. It is also possible that it feeds upon lizards in the littoral zone. In the sea its average foraging depth is from 1-4m. It is an inoffensive snake and although it is venomous, it will make no attempt to bite, even when handled.

In the Indo-Pacific, a species of snake eel *Myrichthys colubrina* is often mistaken for *Laticauda*. This black and white banded eel appears to mimic the snake in both color pattern and behavior.

***Laticauda crockeri* Slevin Plate 16a, b, 20g**

*Distribution:* Lake Te-Nggano, Rennell.

*Description:* The following is Slevin's (1934) description of the holotype.



"Body compressed, markedly so posteriorly; head scarcely distinct from neck; snout elongate, rounded at tip; nasal large, occupying most of the posterior part of the nasal plate; no zygous prefrontal present; tip of third labial touching the eye, the fourth broadly in contact; rostral as high as broad; genials equal in length, the posterior ones not broadly in contact; gastrosteges two and one-half times as broad as long, with lateral keel anteriorly. Scales smooth, in 21 rows; gastrosteges 199; urosteges 29; anal divided; upper labials 7-7; lower labials 8-8; preoculars 1-1; postoculars 2-2; sex male. Color uniform dark brown with yellowish anal plate. Total length 479mm; tail 64mm."

Slevin described *crockeri* from a single specimen collected in Lake Te-Nggano in 1933. In the early 1950's a Danish expedition collected several melanotic *Laticauda* in the lake. These were described as the subspecies *laticaudata wolffi* by Volsøe (1956). *Crockeri* supposedly differed from *laticaudata wolffi* in the number of midbody scale rows (21 in *crockeri*, 19 in *laticaudata wolffi*) and the presence of dark banding in *laticaudata wolffi* and the absence of banding in *crockeri*. In 1977 I collected a large series of melanotic *Laticauda* in Lake Te-Nggano (now in the Australian Museum). I found that the dark banding varied from reasonably distinct to absent. Although most specimens had 19 scale rows at midbody, several had 21, and one individual had 19, 20 and 21 rows in an area around midbody. There was no relation between the number of midbody scale rows and the degree of distinction of the dark banding. *Crockeri* and *laticaudata wolffi* are almost certainly synonymous, this however, is not being formally proposed here.

*Ecology*: This snake is abundant in Lake Te-Nggano and forages in the shallow water at the edge of the lake and often also collects in the fresh-water springs that occur at several sites around the edge of the lake. Although the lake is land-locked, the water is brackish. This snake sometimes leaves the water and can be found moving amongst the short grass surrounding the lake. It is an inoffensive species and will make no attempt to bite, even when handled; the Rennellese people do not believe that this snake is venomous. *Crockeri* presumably feeds on a species of eel *Anguilla obscura* and a small fish *Eleotris fusca* that commonly occur in the lake. It is also likely that it feeds upon small *Tilapia*, this latter fish having been recently introduced into Lake Te-Nggano.

***Laticauda laticaudata* (Linnaeus) Plate 16c, 20h**

*Distribution*: Eastern Indian and W. Pacific Oceans. Volsøe (1956) describes an endemic subspecies *wolffi* from Lake Te-Nggano on Rennell (see under description of *L. crockeri*).

*Description*: Average total length about 750mm, grows to about 1m. Head small, scarcely distinct from the neck. The body is more or less round in cross section. The tail is laterally compressed and paddle-shaped. Nostrils in a lateral position. No zygous prefrontal. A single preocular and 2 postoculars. The frontal is longer than its distance from the snout. Seven

supralabials, the 3rd and 4th entering the eye. Midbody scales in 19 rows. Ventrals well developed, 225-243. Anal divided. 38-47 subcaudals in males, 30-35 in females, all divided.

*Color:* Dorsally light bluish grey with 25-70 black bands of more or less uniform thickness, some or all of these bands may be incomplete ventrally. The head is black and the upper labials and snout to about the level of the eyes are yellow. Ventrally white to cream.

*Ecology:* A rare species in the Solomons. Its ecology is probably similar to *L. colubrina*. The specimen illustrated I collected off San Cristobal at night about 100m offshore while it was swimming on the surface.

### Genus *Pelamis* Daudin

A monotypic genus. Head shields enlarged, regular. Ventrals much reduced in size. Mental groove absent. Body scales small and juxtaposed.

#### *Pelamis platurus* (Linnaeus)

*Distribution:* Tropical and temperate regions of the Indian and Pacific Oceans.

*Description:* Average total length 700mm, grows to over 1m. Head large and elongated. Body laterally compressed. Tail laterally compressed and paddle-shaped. No mental groove. 1 or 2 preoculars and 2 or 3 postoculars. Frontal large, as long as its distance from the snout. 7-8 supralabials, usually separated from the eye by subocular scales. The body is covered with small, more or less hexagonal scales. Midbody scales in 49-67 rows, these body scales are juxtaposed. 264-406 ventrals which are scarcely distinguishable from the surrounding body scales.

*Color:* The color and pattern are variable. The commonest color form is black above and yellow or cream below, these colors sharply differentiated midlaterally. The head is black above and the upper lip is usually yellow. The tail is usually mottled black and yellow.

*Ecology:* This species is not commonly seen in the Solomons, possibly because it rarely comes close to the coast, being a pelagic species. It often swims amongst floating debris in the sea and feeds on the small fish (often larvae of pelagic species) that also collect there. These collections of floating debris usually mark the edges of currents. Whether *Pelamis* is carried by these currents or actively seeks them out for feeding or protective purposes is debatable. In the open sea, *Pelamis* is most often seen swimming on the surface. If it is approached it will at once dive vertically down into deep water. Solomon Islanders have told me that they have seen the Brahminy Kite *Haliastur indus* preying on *Pelamis*. This snake is venomous and human fatalities have been attributed to its bite in other parts of the world.

## GLOSSARY

- Abdominal glands:** Glands, usually 2, lying towards the posterior venter of some species of skinks of the genus *Tribolonotus*. These glands are usually covered by enlarged scales.
- Adpress:** To press flat against the body. When the limbs are adpressed, the forelimb is pressed backwards against the body and the hindlimb is pressed forwards against the body.
- Annuli:** Rings or ring-like structures or patterns. Usually refers to scales.
- Anterior:** Pertaining to the front, or head end of an animal.
- Arboreal:** Dwelling in trees.
- Auricular lobules:** Small protruding scales at the anterior edge of the ear opening in some skinks.
- Azygous:** Not one of a pair, e.g. an azygous scale.
- Bifid:** Branching into 2, i.e. forked.
- Bridge:** In turtles, that part of the shell connecting the carapace to the plastron.
- Canthus rostralis:** The ridge formed between the side and the top of the snout.
- Carapace:** In turtles, the top of the shell.
- Carinate:** Having a ridge or keel, usually refers to scales.
- Caudal:** Pertaining to the tail.
- Circumnasals:** In geckos, the enlarged scales (other than the rostral and labials) surrounding the nostril.
- Cloaca:** The chamber into which the urinary, digestive and reproductive ducts open.
- Cryptozoic:** A secretive existence; living hidden under leaves, logs etc.
- Digital expansion:** In geckos, that portion of the fingers and toes that is more or less distinctly dilated.
- Distal:** That portion of a limb, digit, tail etc. that is furthest from its point of attachment to the body.
- Diurnal:** Active during the day as opposed to *nocturnal* (active during the night) or *crepuscular* (active at dawn and/or dusk).
- Dorsal:** Pertaining to the back (*dorsum*).
- Dorsolateral:** The area of the body where the side meets the back.
- Endemism (endemic):** Occurring in a particular country or region and not elsewhere.
- Fossorial:** Burrowing; an animal of burrowing habits.
- Front-fanged:** In venomous snakes, having the fangs situated at the front of the maxillary bone.
- Gastrosteges:** The ventral scales; the broad belly scales of snakes.
- Gular fold:** A transverse fold of skin under the neck.
- Hemipenes:** The paired male copulatory organs of snakes and lizards. Turtles and crocodiles have a single penis.
- Herbivorous:** Feeding on plant material.
- Herpetology:** The study of reptiles and amphibians,

**Imbricate:** Overlapping one another, e.g. imbricate scales.

**Juxtaposed:** Lying side by side, not overlapping.

**Keel:** A ridge, usually refers to keeled scales.

**Labial:** 1. Pertaining to the lips. 2. The scales on the lips; *supralabials* are situated along the edge of the upper lip, *infralabials* on the lower lip.

**Lamellae:** The ridges under the digits in lizards.

**Lateral:** Pertaining to the sides of the body.

**Lateral fold:** A longitudinal fold of skin along the lower edge of the side of the body.

**Littoral:** Pertaining to the seashore.

**Mandible:** The lower jaw.

**Maxillary:** The upper jaw.

**Melanotic:** Dark colored as a result of an exceptional development in the amount of black pigment.

**Mental:** 1. Pertaining to the chin. 2. The scale at the tip of the chin.

**Mental groove:** A groove on the underside of the chin.

**Monogeneric:** A family containing a single genus.

**Monotypic:** A genus containing a single species.

**Montane:** Pertaining to mountainous areas.

**Neurotoxic:** A venom or poison affecting the nervous system.

**Nuchal:** 1. Pertaining to the neck. 2. The enlarged scales (usually paired) on the top of the neck.

**Occiput (Occipital region):** The area at the back of the head.

**Orbit:** The cavity in the skull housing the eyeball.

**Oviparous:** Egg-laying.

**Palpebral disc:** A transparent disc on the lower eyelid of some skinks.

**Parthenogenesis:** Reproduction without fertilization of the ovum by a male.

**Pelagic:** Dwelling in the open sea.

**Pentadactyl:** Having 5 digits on a limb.

**Phalanx (pl. phalanges):** The individual bones of a digit.

**Plastron:** In turtles, the lower part of the shell.

**Pores:** The opening of glands that are situated on different parts of the body of some lizards. *Femoral pores* are situated across the insides of the thighs, *preanal pores* anterior to the vent. *Palmar pores* are situated on the insides of the hands, *plantar pores* on the inside of the feet.

**Posterior:** Pertaining to the rear, or tail end of an animal.

**Postmental:** The scale(s) situated immediately posterior to the mental scale.

**Preanals:** In lizards, the scales situated immediately anterior to the vent.

**Proximal:** That portion of a limb, digit, tail etc. that is closest to its point of attachment to the body.

**Rear-fanged:** In venomous snakes, having the fangs situated at the rear of the maxillary bone.

**Rostral:** The scale at the tip of the upper jaw.

**Sexual dimorphism:** A difference between male and female of the same species. Usually a difference in size or proportion or color (*sexual dichromatism*).

**Subcaudal:** 1. The underside of the tail 2. The scales (usually enlarged) on the underside of the tail.

**Superspecies:** A group of animals descended from a common ancestor but not occurring together, that have differentiated to a degree indicative of speciation.

**Supranasal:** A small scale situated immediately above the nasal scale.

**SVL:** Snout-vent length, the standard measurement of lizards. The distance from the snout to the vent measured ventrally.

**Terrestrial:** Dwelling on the ground.

**Tubercle:** A small protuberance, e.g. a small conical scale.

**Tympanum:** The resonating membrane of the ear.

**Urosteges:** The enlarged scales under the tail (=subcaudals).

**Vent:** The external opening of the cloaca.

**Venter:** The belly or underside of the body.

**Ventral:** 1. Pertaining to the venter. 2. The broad belly scales of snakes.

**Ventrolateral:** That area of the body where the side meets the belly.

**Vertebral:** 1. That part of the body lying over the backbone. 2. In turtles, the dermal plates down the centre of the carapace.

## Literature cited and references

- Barbour, T. 1921. Reptiles and amphibians from the British Solomon Islands. *Proc. New Eng. Zool. Club* 7: 91-112.
- Boulenger, G.A. 1884. Diagnoses of new reptiles and batrachians from the Solomon Islands, collected and presented to the British Museum by H.B. Guppy, Esq., M.B., H.M.S. Lark. *Proc. Zool. Soc. Lond.* 210-213.
- 1885-1887a. Catalogue of the lizards in the British Museum (N.H.), Vols. 1-3, British Museum (N.H.) London.
- 1887b. Second contribution to the herpetology of the Solomon Islands. *Proc. Zool. Soc. Lond.* 333-338.
- 1893-1896. Catalogue of the snakes in the British Museum (N.H.), Vols. 1-3, British Museum (N.H.) London.
- Brown, W.C. 1954. Notes on several lizards of the genus *Emoia* with descriptions of new species from the Solomon Islands. *Fieldiana, Zoology* 34(5): 263-276.
- Brown, W.C. & A.C. Alcalá. 1978. *Philippine Lizards of the Family Gekkonidae*. Silliman University, Philippines.
- Brown, W.C. & M. McCoy. 1980. A new species of gecko of the genus *Cyrtodactylus* from Guadalcanal Island, Solomon Islands. *Herpetologica* 36 (1): 66-69.
- Brown, W.C. & F. Parker. 1977. Lizards of the genus *Lepidodactylus* (Gekkonidae) from the Indo-Australian Archipelago and the islands of the Pacific, with descriptions of new species. *Proc. Cal. Acad. Sci.* (4th ser.) 41(8): 253-265.
- Brown, W.C. & V.M. Tanner. 1949. Rediscovery of the genus *Pseudogekko* with description of a new species from the Solomon Islands. *Great Basin Nat.* 9(3-4): 41-45.
- Burt, C.E. 1930. Herpetological results of the Whitney South Sea expedition IV. Descriptions of new species of lizards from the Pacific Islands (Scincidae). *Am. Mus. Nov.* 427: 1-3.
- Burt, C.E. & M.D. Burt. 1932. Herpetological results of the Whitney South Sea expedition VI. *Bull. Am. Mus. Nat. Hist.* 63: 461-597.
- Bustard, R. 1970. Activity cycle of the tropical house gecko, *Hemidactylus frenatus*. *Copeia* 1970(1): 173-176.
1972. *Australian Sea Turtles - Their Natural History and Conservation*. Collins, Sydney & London.
- Cogger, H.G. 1975. *Reptiles and Amphibians of Australia*. A.H. & A.W. Reed, Sydney, Wellington & London.
- De Rooij, N. 1915. *The Reptiles of the Indo-Australian Archipelago. Vol. 1. Lacertilia, Chelonia, Emydosauria*. Leiden, E.J. Brill.
1917. *The Reptiles of the Indo-Australian Archipelago. Vol. 2. Ophidia*. Leiden, E.J. Brill.
- Duméril, A.M.C. & G. Bibron. 1836-1844. *Erpétologie Générale* Vols. III & VI.

- Ernst, C.H. & R.W. Barbour. 1972. *Turtles of the United States*. University Press of Kentucky.
- Greer, A.E. 1968. Clutch size in the scincid genus *Emoia*. *Copeia* 1968(2): 417-418.
1970. The relationships of the skinks referred to the genus *Dasia*. *Breviora* (MCZ, Harvard) 348: 1-30.
1974. The generic relationship of the scincid lizard genus *Leiopismis* and its relatives. *Aust. J. Zool. Suppl.* 31: 1-67.
- Greer, A.E. & F. Parker. 1967a. A new scincid lizard from the northern Solomon Islands. *Breviora* 275: 1-21.
- 1967b. A second skink with fragmented head scales from Bougainville, Solomon Islands. *Breviora* 279: 1-12.
- 1968a. A new species of *Tribolonotus* (Lacertilia: Scincidae) from Bougainville and Buka, Solomon Islands, with comments on the biology of the genus. *Breviora* 291: 1-23.
- 1968b. *Geomyersia glabra*, a new genus and species of scincid lizard from Bougainville, Solomon Islands, with comments on the relationship of some lygosomine genera. *Breviora* 302: 1-17.
1971. A new scincid lizard from Bougainville, Solomon Islands. *Breviora* 364: 1-11.
- Greer, A.E. & G. Raizes. 1969. Green blood pigment in lizards. *Science* 166: 392-393.
- Heatwole, H. 1975. Biogeography of reptiles of some of the islands and cays of eastern Papua New Guinea. *Atoll Research Bulletin* 180. The Smithsonian Institution.
- Kinghorn, J.R. 1928. Herpetology of the Solomon Islands. *Rec. Aust. Mus.* 16(3): 123-178.
1937. A new species of skink from the Solomon Islands. *Rec. Aust. Mus.* 20(1): 1-2.
- Kelmer, K. 1963. Liste der rezenten Giftschlangen; in *Die Giftschlangen der Erde*. 255-464. Marburg/Lahn, N.G.E. Uni. -und Verlags-Buchhandlung.
- Kluge, A.G. 1966. Phylogenetic relationships of the gekkonid lizard genera *Lepidodactylus* Fitzinger, *Hemiphyllodactylus* Bleeker and *Pseudogekko* Taylor. *Phil. J. Sci.* 95(3): 331-352.
- Loveridge, A. 1948. New Guinea reptiles and amphibians in the Museum of Comparative Zoology and United States National Museum. *Bull. Mus. Comp. Zoo.* 101: 305-430.
- Macleay, W. 1877. *Tiaris longii*. *Proc. Linn. Soc. NSW.* 2(39): 103.
- McCoy, M. 1978. The agamid *Gonocephalus godeffroyi* in the Solomon Islands. *Herpetofauna* 10(1). 2-4.
- McDowell, S.B. 1969. On the status and relationship of the Solomon Islands elapid snakes. *J. Zool. Lond.* 191:145-190.
1974. A catalogue of the snakes of New Guinea and the Solomons, with special reference to those in the Bernice P. Bishop Museum, Part 1. *Scolocophidia. J. Herp.* 8(1): 1-57.

- McKeown, S. 1978. *Hawaiian Reptiles and Amphibians*. Oriental Publishing Co., Honolulu.
- Mertens, R. 1931. *Ablepharus boutonii* (Desjardin) und seine geographische variation. *Zool Jahrb. Abt. Syst.* 61:63-210.
1942. Die familie der warane (Varanidae). *Abh. Senck. Nat. Ges.* 462: 1-116.
1963. Liste der rezenten amphibien und reptilien. Helodermatidae, Varanidae, Lanthanotidae. *Das Tierreich* 79: i-x, 1-26.
- Mittleman, M.B. 1952. A generic synopsis of the lizards of the subfamily Lygosominae. *Smithsonian Misc. Coll.* 117(17): 1-35.
- Montrouzier, M. 1860. *Boa australis*. *Rev. et Mag. Zoo.* 1(12): 95.
- Parker, H.W. 1925. Notes on lizards from the South Pacific islands. *Ann. Mag. Nat. Hist.* (9)15: 298-300.
- Schmidt, K.P. 1932. Reptiles and amphibians from the Solomon Islands. *Pub. Field Mus. Nat. Hist.* 18: 175-190.
- Schmidt, K.P. & C.E. Burt. 1930. Herpetological results of the Whitney South Sea Expedition V. Description of *Emoia sanfordi*, a new lizard from islands of the Western Pacific (Scincidae). *Am. Mus. Nov.* 436: 1-3.
- Slevin, J.R. 1934. The Templeton Crocker Expedition to western Polynesian and Melanesian islands 1933. No. 15. Notes on the reptiles and amphibians with the description of a new species of sea snake. *Proc. Cal. Acad. Sci.* (4th ser.) 21(15): 183-188.
- Smith, M. 1926. *Monograph of the Sea Snakes (Hydrophiidae)*. British Museum (N.H.), London.
- Stimson, A.F. 1969. Liste der rezenten amphibien und reptilien. Boidae. *Das Tierreich* 89: i-xi, 1-49.
- Tanner, V.M. 1951. Pacific Islands Herpetology No. V., Guadalcanal, Solomon Islands, a checklist of species. *Great Basin Nat.* 11(3-4): 53-86.
- Volsøe, H. 1956. Herpetology of Rennell Island, in *The Natural History of Rennell Island, British Solomon Islands, Vol. 1.*, Copenhagen.
- Waite, E.R. 1905. Additions to the lacertilian fauna of the Solomon Islands. *Rec. Aust. Mus.* 6: 13-16.
- Webster, T.P. 1969. Aspects of the morphological and ecological variation in the *cyanura* group of the lizard genus *Emoia* (Sauria: Scincidae) in the Solomon Islands. B.A. Honors thesis (Biology), Harvard University, Cambridge, Massachusetts.
- Williams, E.E. & F. Parker. 1964. The snake genus *Parapistocalamus* on Bougainville, Solomon Islands. *Senk. biol.* 45: 543-552.
- Worrell, E. 1963. *Reptiles of Australia*. Angus & Robertson, Sydney.
- Zweifel, R.G. 1966. A new lizard of the genus *Tribolonotus* (Scincidae) from New Britain. *Am. Mus. Nov.* 2264: 1-12.



## APPENDIX

The following notes on preservation of reptile specimens are intended as a guide when it is necessary to kill and preserve a specimen in order to obtain a positive identification from an overseas museum. The killing and preservation of reptiles for no good purpose should always be avoided, as it is only justifiable when a further understanding of biology results.

Reptiles can be conveniently and humanely killed by placing them in the freezer compartment of a refrigerator for about 30-60 minutes. Otherwise they can be killed by placing them in a sealed plastic bag to which a wad of cotton wool soaked in ether or chloroform has been added, although this latter method can cause muscular contraction and distort the specimen.

After death they are fixed by injecting a 10% formalin solution into the body and tail at several sites, taking care not to over-inflate and distort the specimen. They are then placed in a tray and covered with white tissue paper soaked in 10% formalin. They should be positioned so that features such as scale rows, lamellae etc. can easily be counted. They are left in this position for 12-48 hours depending on size. When completely fixed they should be fully rigid. The tray should be covered to prevent evaporation of the formalin. If formalin is not available, specimens may be placed directly in commercially available methylated spirits. If injection equipment is not available, several slits should be made along the sides of the body to enable the preservative to enter the internal organs. After fixing they are placed in 75% ethanol (or 70% ethanol for geckos) for long-term preservation.

A label should always be included with the specimen. A piece of heavy white paper or cardboard with the data written in pencil should be securely tied to each specimen with strong thread. Information on the label should include the date and precise locality of collection.

For shipping, specimens fixed in formalin may be placed directly in a plastic bag or similar airtight container without the need for immersion in preservative. Provided they are kept airtight and not allowed to dry out, they will keep this way for a reasonable length of time. Specimens that have not been fixed should be kept fully immersed in their preservative. The container should be well packed to prevent damage to the specimens. The outside of the package should be marked: "Biological Specimens in Sterile Preservative. For Scientific Study. N.C.V."

Both the Australian Museum and the American Museum of Natural History will gladly accept and identify preserved reptiles from the Solomon Islands. Live reptiles should not be sent.

Herpetology Department  
Australian Museum  
College Street  
Sydney, N.S.W. 2000  
Australia

Herpetology Department  
American Museum of Natural History  
New York, N.Y. 10024  
U.S.A.

## INDEX OF GENERA AND SPECIES

- Acrochordus* 61  
*affinis*, *Typhlina* 56, 57  
*albofasciatus*, *Eugongylus* 39  
*angusticeps*, *Typhlina* 56, 57  
*aspera*, *Candoia* 59  
*atriceps*, *Hydrophis fasciatus* 67  
*atrocostata*, *Emoia* 32  
*australia*, *Candoia bibroni* 60
- belcheri*, *Hydrophis* 67  
*bibroni*, *Candoia* 59, 60  
*bignelli*, *Sphenomorphus* 44  
*biordinis*, *Cyrtodactylus* 17, 18  
*bissa*, *Eretmochelys imbricata* 9  
*blanchardi*, *Tribolonotus* 46, 49  
*Boiga* 62  
*bramina*, *Typhlina* 56, 57
- caeruleocauda*, *Emoia* 31, 33  
*calligaster*, *Dendrelaphis* 63  
*Candoia* 59  
*Caretta* 8  
*caretta*, *Caretta* 8  
*carinata*, *Candoia* 59, 60  
*Carlia* 27, 29  
*Chelonia* 8  
*colubrina*, *Laticauda* 68, 69, 71  
*concinatus*, *Sphenomorphus* 44, 45  
*coriacea*, *Dermochelys* 11  
*Corucia* 29, 30  
*cranei*, *Sphenomorphus* 44, 45  
*crockeri*, *Laticauda* 69, 70  
*Crocodylus* 12  
*Cryptoblepharus* 27, 30  
*cumingii*, *Typhlops* 57  
*cyanocinctus*, *Hydrophis* 67  
*cyanogaster*, *Emoia* 32, 34  
*cyanura*, *Emoia* 32, 34  
*Cyrtodactylus* 15
- Dendrelaphis* 63  
*Dermochelys* 11
- elapoides*, *Loveridgelaps* 64  
*Emoia* 27, 31  
*Eretmochelys* 9  
*Eugongylus* 29, 39
- fasciatus*, *Hydrophis* 67  
*flavicularis*, *Emoia* 32, 35  
*flaviventer*, *Typhlina* 56, 58  
*fragosus*, *Sphenomorphus* 44, 46  
*frenatus*, *Hemidactylus* 19, 22  
*fusca*, *Carlia* 29
- Gehyra* 15, 19  
*Gekko* 15, 21  
*Geomyersia* 27, 40  
*gigas*, *Caretta caretta* 8  
*glabra*, *Geomyersia* 40  
*godeffroyi*, *Gonocephalus* 13  
*Gonocephalus* 13  
*granulatus*, *Acrochordus* 61  
*guppyi*, *Lepidodactylus* 24, 26
- hedigeri*, *Parapistocalamus* 64, 65  
*Hemidactylus* 15, 22  
*Hemiphyllodactylus* 15, 23  
*Hydrophis* 66, 67
- imbricata*, *Eretmochelys* 7, 9  
*indicus*, *Varanus* 4, 52  
*irregularis*, *Boiga* 62
- japonica*, *Chelonia mydas* 8
- Lamprolepis* 29, 41  
*Laticauda* 66, 68  
*laticaudata*, *Laticauda* 69, 70  
*Lepidochelys* 10  
*Lepidodactylus* 15, 23  
*Lipinia* 27, 42  
*louistadensis*, *Cyrtodactylus* 17  
*Loveridgelaps* 64  
*lugubris*, *Lepidodactylus* 20, 24, 25
- maculata*, *Emoia* 32, 36  
*mansuetus*, *Typhlops cumingii* 57  
*melanocephalus*, *Hydrophis* 68  
*minutus*, *Sphenomorphus* 44  
*mivarti*, *Emoia* 31, 37  
*mutahi*, *Lepidodactylus* 24, 25  
*mutilata*, *Gehyra* 19  
*mydas*, *Chelonia* 7, 8, 9, 10
- nigra*, *Emoia* 32, 35, 37  
*noctua*, *Lipinia* 42
- oceanica*, *Gehyra* 19, 20  
*olivacea*, *Lepidochelys* 7, 10  
*ornatus*, *Hydrophis* 68

*par*, *Salomonelaps* 64, 65  
*Parapistocalamus* 65  
*paulsoni*, *Candoia carinata* 60  
*pelagicus*, *Cyrtodactylus* 17  
*Pelamis* 67, 71  
*platurus*, *Pelamis* 71  
*poecilopleurus*, *Cryptoblepharus* 31  
*ponceleti*, *Tribolonotus* 49, 50  
*porosus*, *Crocodylus* 12  
*Prasinohaema* 27, 42  
*pseudoponceleti*, *Tribolonotus*  
49, 51  
  
*rufescens*, *Eugongylus* 39, 40  
  
*Salomonelaps* 64, 65  
*salomonis*, *Dendrelaphis calligaster*  
63  
*samoensis*, *Emoia* 38, 39  
*sanfordi*, *Emoia* 32, 38  
*schmidti*, *Emoia* 36  
*schmidti*, *Tribolonotus* 47, 49, 51  
*shebae*, *Lepidodactylus* 24, 26  
*smaragdina*, *Lamprolepis* 41  
*solomonis*, *Sphenomorphus* 44, 46

*Sphenomorphus* 29, 43  
*spinulosus*, *Varanus indicus* 53  
*subocularis*, *Typhlina* 56, 58  
  
*tanneri*, *Sphenomorphus* 44, 47  
*taylori*, *Sphenomorphus* 43, 47  
*transversus*, *Sphenomorphus* 44, 48  
*Tribolonotus* 29, 49  
*Typhlina* 56, 65, 66  
*typus*, *Hemiphyllodactylus* 23  
  
*undulatus*, *Sphenomorphus* 44, 48  
  
*Varanus* 52  
*virens*, *Prasinohaema* 42  
*vittatus*, *Gekko* 21, 25  
  
*weneri*, *Emoia caeruleocauda* 33  
*willeyi*, *Typhlina* 56, 58  
*wolffi*, *Laticauda laticaudata* 70  
*woodfordi*, *Denisonia* 65  
*woodfordi*, *Lepidodactylus* 24, 26  
*woodfordi*, *Sphenomorphus* 44, 48  
  
*zebrata*, *Corucia* 4, 30

## WAU ECOLOGY INSTITUTE

This book is published by the WAU ECOLOGY INSTITUTE, which is an organization dedicated to education for ecology and conservation in Papua New Guinea. The Institute is located at Wau (alt. 1200 metres) in the mountains of eastern Papua New Guinea. It encompasses a large arboretum of native plants, a zoo, a small museum, and some facilities for research.

Visitors are welcome at the Institute. There are guest houses and a hostel, with bedding and cooking facilities supplied. There is a branch station at 2360 meters altitude. Inquire for rates.

Contributions are solicited for fellowships, and for developing the zoo and displays. Gifts are tax-free in Papua New Guinea (tax-free in USA if sent to Ecology Fund, Bishop Museum, Box 19000-A, Honolulu, Hawaii 96819).

### Publications of Wau Ecology Institute

#### HANDBOOKS

1. Handbook of common New Guinea frogs. J. I. Menzies. 75 p; 12 col. pls. K3.00; US\$4.50
2. Handbook of common New Guinea beetles. J. L. Gressitt & R.W. Hornabrook. 87 p; 4 col. pls. other illustr. K3.00; US\$4.50
3. Guide to biological terms in Melanesian Pidgin. Martin Simon. 115 p; illustr. K2.50; US\$4.00
4. Guide to montane birds of Northeast New Guinea. Bruce Beehler. Illustrated by Wm Adams. 157 p; 10 pls (5 col.) many drawings. K5.00; US\$8.50
5. Guide to Mt Kaindi: Background to montane New Guinea ecology. J. L. Gressitt & Nalini Nadkarni, illustrated by Margaret Gressitt. Many illustr. K3.00; US\$5.00
6. Handbook of New Guinea rodents. J. Menzies & E. Dennis. 68 p; 8 col. pls. K3.00; US\$5.00
7. Reptiles of the Solomon Islands. M. McCoy. 80 p; 8 col. pls. K3.00; US\$5.00

## **PAMPHLETS**

- Guide to native land mammals of Northeast New Guinea.  
Bishop Mus. A. C. Ziegler (for Wau Ecology Inst.) 28 p.  
K1.25; US\$2.00
- Ecology and conservation in Papua New Guinea. K. P. Lamb  
& J. L. Gressitt, editors. K1.35; US\$2.00

## **LEAFLETS**

- Yumi olgeta laikim diwai (We all need trees) J. L. & M. K.  
Gressitt. 8 p; K0.20; US\$0.40
- Lukautim samting long Papua New Guinea (Conservation).  
J. L. Gressitt. G. Nalu & W. C. Gagne. K0.25; US\$0.50

## **BIENNIAL REPORTS**

- First biennial report; October 1971 to December 1973. J. L.  
Gressitt. 14 p; K0.50; US\$0.80
- Second biennial report; January 1974 to December 1975.  
J. L. Gressitt. 16 p; K0.50; US\$0.80
- Third biennial report; January 1976 to December 1977. J. L.  
Gressitt. K0.50; US\$0.80
- Fourth biennial report; January 1978 to December 1979.  
J. L. Gressitt. K0.50; US\$0.80

Order from: WEI, Box 77, Wau, Papua New Guinea: except  
Americas and Europe: Order from Bishop Museum Press,  
Box 19000-A, Honolulu, Hawaii, 96819