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Check List of the Palpicornia of Oceania (Coleoptera, Polyphaga)

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INTRODUCTION

Palpicornia of Oceania, as summarized in my paper of 1933 (17)[1], are very few in number. To my knowledge there are but seven species recorded as endemic to the Oceanic islands, a scarcity which may be explained by several circumstances. Many islands are of coral or very recent volcanic origin. Consequently they have been submitted to colonization for a relatively short period and the occasional immigrant stock has not had sufficient time to evolve into separate genera or species. Furthermore, insular faunas are generally poor due to their isolation; this must be especially true for the remote Oceanic islands which must have been colonized with difficulty from elsewhere. That ancient Moorea and Tahiti, for instance, so greatly changed through long geological ages and with such varied topography, should be so poor in Palpicornia seems surprising and not to be explained solely by lack of specialized explorations. Insular faunas may be poor not only in species but also in individuals. In this connection, Krone's (12, p. 153) comments on the fauna of the sub-antarctic Auckland Islands, which I translate freely, may be called to mind: " . . . but, with the exception of troublesome sandflies and great blue horseflies which occur by millions near the seashore,

[1] Numbers in parentheses refer to Literature Cited, p. 13.

how barren the insect-world appears! Only by tiresome and experienced researches, during the period from October to February, does one succeed in finding a beetle now and then. . . . "

However, very few Oceanic islands have been methodically explored for Palpicornia. These insects live in the most varied conditions: in mountain streams under stones; in trickling water on vertical rocks; in lakes and ponds; in slow running water between water plants; in mud on banks of waters; in accumulations of water at the bases of leaves; in wet mosses and in hepatics near streams or waterfalls; in rotten wood, fruits, or refuse; in wet tree-wounds; in dung of indigenous animals; in guano; under dead bodies of birds and other animals; between fallen and wet leaves in humid, endemic forests; on sea coasts in small or very small salt rock-pools near the high-tide line; and even (as *Rygmodus* and *Saphydrus* in New Zealand) upon flowers and shrubs. Conclusions as to the poverty in Palpicornia of an island cannot be drawn until all these habitats have been thoroughly investigated.

I have mentioned all these particulars as to habitat and patient collection, in the hope that entomologists, visiting Oceanic islands, will devote some of their time in the future to the much neglected group here considered.

OCEANIC SPECIES OF PALPICORNIA

Table 1. Oceanic Hydrophilid Fauna[2]

Species	Caroline Islands (Ponape)	Marshall Islands	Gilbert Islands (Nauru)	Fiji including Vatu Leile	Samoa	Tokelau Islands (Atafu)	Tahiti	Hawaii
Hydraenidae								
Hydraeninae								
Ochthebius (Asiobates) eremita Knisch				*				
Hydrophilidae (s. str.)								
Sphaeridiinae								
Coelostoma fabriciusi (Montrouzier) (Cyclonotum extraneum Sharp)								×
? species Kolbe[3]		×						
? species Kolbe[3]		×						
Dactylosternum abdominale (Fabricius)			×		×			×
Dactylosternum subquadratum (Fairmaire) (titanicum Knisch)				×	×		×	×
Dactylosternum superficiale Knisch	*							
New endemic genus near Dactylosternum				*				
Cercyon quisquilius (Linné)[4]								×
Omicrus brevipes Sharp								*
Noteropagus politus A. d'Orchymont					×			
Cryptopleurum minutum (Fabricius)[4]								×
Hydrophilinae								
Limnoxenus nesiticus (Sharp)								*
Limnoxenus semicylindricus (Eschscholtz)								*
Helochares (Hydrobaticus) simulator Knisch				×		×		
Helochares (s. str.) pallens (MacLeay)[5]								
Enochrus (Lumetus) bryani A. d'Orchymont					*			
Enochrus (Lumetus) pygmaeus (Fabricius) [Enochrus nebulosus (Say)][6]								×
Enochrus (Lumetus) ?tritus (Broun)					×			
Enochrus (Lumetus) sp.[7]							×	
Enochrus (Methydrus) parvulus (Kuwert)					×			
Sternolophus (Neosternolophus) artensis (Montrouzier)[8]				×				
Hydrous (s. str.) gayndahensis (MacLeay) (Hydrophilus sabellifer Fairmaire)				×				

[2] Species are listed in tables systematically for genera and subgenera, alphabetically for species. Endemic genera and species are noted with asterisks.

[3] Schnee (19, p. 391) gives *Cyclonotum* 2 spp. (Kolbe det.) as belonging to the subfamily Sphaeridiinae but no particulars to test the exactitude of the generic attribution.

[4] First recorded as a recent European immigrant in Hawaiian Ent. Soc., Proc., **4**: 607, 1921. I have not seen specimens.

[5] "Nord de l'Océanie" under *minutissimus*, according to Régimbart (18, p. 54). I am not acquainted with the species in Oceania.

[6] First recorded as a recent American immigrant in Hawaiian Ent. Soc., Proc., **8**: 16. 1932 and **9**: 268, 1936. I have not seen specimens.

[7] The species designated as *Philhydrus melanocephalus* (Fabricius) from Tahiti in Fairmaire (5, p. 411) cannot belong to that palearctic species. For that reason I have mentioned only "sp.".

[8] According to Fauvel (6, p. 352; 7, p. 352), but the determination must be tested.

List of Species

Family HYDRAENIDAE

HYDRAENINAE

Ochthebius (Asiobates) eremita Knisch*, Archiv Naturg., 88 A (5) : 87, 1922.
Fiji.

Family HYDROPHILIDAE (s. str.)

SPHAERIDIINAE

Coelostoma fabriciusi (Montrouzier).
Ochthebius Fabricii Montrouzier, Soc. Ent. France, Ann., III, 8: 245, 1860.
?Cyclonotum mastersi MacLeay, Ent. Soc. N. S. Wales, Trans., II, 2: 133, 1871.
?Cyclonotum australe Blackburn, Linn. Soc. N. S. Wales, Proc., II, 3: 839, 1888.
Cyclonotum extraneum Sharp, Fauna Hawaiiensis, 3: 579, 1908.
Hawaiian islands: Oahu, ? Kauai (Sharp). New Caledonia. Australia.

Dactylosternum abdominale (Fabricius).
Sphaeridium abdominale Fabricius, Ent. Syst., 1: 79, 1792.
Coelostoma insulare Castelnau, Hist. nat. Anim. artic., 2: 59, 1840.
Cyclonotum nitidum Boheman (non Cast., 1840), Ins. Caffr., 1: 602, 1851.
Dactylosternum rousseti Wollaston, Ins. Mad., 100, pl. 3, fig. 1, 1854.
Dactylosternum natalense Gemminger and Harold, Cat. Col., 2: 495 (nom. in cat.), 1868.
Cyclonotum mulsanti Murray, Ann. Mag. Nat. Hist., III, 4: 352, 1859.
Hydrobius semistriatus Schaufuss, Hor. Soc. Ent. Ross., 21: 108, 1887.
Dactylosternum var. *foveonitidum* Kuwert, Verh. Nat. Ver. Brünn., 28: 179, 1890.
Dactylosternum depressum Régimbart (non Klug, 1833), Soc. Ent. France, Ann., 72: 46, 1903.
Nauru Island (Froggatt). Samoa (A. d'Orchymont). Hawaiian islands (Sharp). Warmer regions of the world except New Zealand.

Dactylosternum subquadratum (Fairmaire).
Cyclonotum subquadratum Fairmaire, Rev. Mag. Zool., II, 1: 412, 1849.
Dactylosternum seriatum titanicum Knisch, Archiv Naturg., 88 A (10): 151, 1922.
Fiji. Samoa (Knisch, A. d'Orchymont). Tahiti (Fairmaire). Hawaiian islands (Sharp). Buru Island. Borneo. Philippines.

Dactylosternum superficiale Knisch*, Treubia, 6: 199, 1925.
Caroline Islands: Ponape.

Cercyon quisquilius (Linné).
Scarabaeus quisquilius Linné, Fauna Suecica, 138, 1761.
Hawaiian islands, immigrant. Palaearctic regions; spread from there to America and even Australia (Blackburn).

Omicrus brevipes Sharp*, Ent. Soc. London, Trans., 82, 1879.
Hawaiian Islands: Oahu, in rotten wood.

Noteropagus politus A. d'Orchymont, Soc. Ent. France, Ann., **88**: 134, 1919.
Samoa (A. d'Orchymont). Mentawei Island. Engano Island. Java.

Cryptopleurum minutum (Fabricius).
Sphaeridium minutum Fabricius, Syst. Ent., 68, 1775.
Hawaiian islands, immigrant. Palaearctic regions; spread from there to America (especially eastern United States).

HYDROPHILINAE

Limnoxenus nesiticus (Sharp)*.
Hydrobius nesiticus Sharp, Fauna Hawaiiensis, **3**: 578, 1908.
Hawaiian islands: Oahu.

Limnoxenus semicylindricus (Eschscholtz)*.
Hydrophilus semicylindricus Eschscholtz, Entomographien, **1**: 42, 1822.
Hawaiian islands (Sharp).

Helochares (Hydrobaticus) simulator Knisch*, Archiv Naturg., **88** A (5): 104, 1922.
Duke of York Island. Fiji: Vatu Leile.

Helochares (s. str.) **pallens** (MacLeay).
Enhydrus pallens MacLeay, Annul. Javan., 35, 1825.
Helochares minutissimus Régimbart (non Kuwert), Soc. Ent. France, Ann., **72**: 54, 335, 1903.
Helochares dispar Sharp, Res. Swed. Zool. Exped. Egypt. White Nile, **10**: 7, 1903.
"Nord de l'Océanie" (Régimbart). Warmer regions of Asia, Sumatra, Africa, Madagascar.

Enochrus (Lumetus) bryani A. d'Orchymont*, Insects of Samoa, (4): 33, fig. 1, 1927.
Samoa: Savaii.

Enochrus (Lumetus) pygmaeus (Fabricius) A. d'Orchymont, Soc. Ent. Belg., Bull. Ann. **73**: 307, 1933 (synonymy of *nebulosus*).
Hydrophilus pygmaeus Fabricius, Ent. Syst., **1**: 186, 1792.
Hydrophilus nebulosus Say, Long's Exped., **2**: 277, 1824.
Hawaiian islands, immigrant from North America.

Enochrus (Lumetus) ? tritus (Broun).
Philhydrus tritus Broun, Man. New Zealand Col., **1**: 78, 1880.
Philhydrus variolorum Broun, Man. New Zealand Col., **1**: 79, 1880.
Samoa: Upolu (A. d'Orchymont). New Zealand: North and South Islands. Kermadec: Sunday Island (Broun).

Enochrus (Methydrus) parvulus (Kuwert).
Philydrus (*Agraphilydrus*) *parvulus* Kuwert, Verh. Nat. Ver. Brünn., **28**: 56, (1889) 1890.
Enochrus (*Lumetus*) *escuriens* Knisch (non Walker), Archiv Naturg., **88**A (10): 151, 1922.
Samoa: Upolu. Syria (Kuwert). Egypt. Tropical Africa including Transvaal. Madagascar. Seychelles. Aldabra. Coetivy Island. India.

Sternolophus (Neosternolophus) artensis (Montrouzier).

Hydrobius artensis Montrouzier, Soc. Ent. France, Ann., III, 3: 247, 1860.

Fiji (Fauvel). New Caledonia (Fauvel): Art (Montrouzier), Isle of Pines (Fleutiaux). ? Australia.

Hydrous (s. str.) **gayndahensis** (MacLeay).

Hydrophilus gayndahensis MacLeay, Ent. Soc. N. S. Wales, Trans., 2: 129, 1871.

Hydrophilus sabelliferus (recte *sabellifer*) Fairmaire, Mus., Godeffr., Jour., 14: 80, 1878.

Fiji: Viti Levu (Fairmaire). Queensland.

The following Oceanic regions were not included in the lists of Oceanic species:

1. New Britain (Neu Pommern) belonging with New Guinea to the Papuan fauna.

2. New Caledonia belonging to the Australian fauna.

3. The Kermadec Islands [one species known: *Enochrus* (*Lumetus*) *tritus* (Broun)], Chatham and Steward Island (no species known); belong with New Zealand, Auckland Islands, and Bounty Island to the antarctic or sub-antarctic fauna.

4. Easter Island (no Palpicornia known).

5. The Galapagos Islands belonging to the neotropic fauna [species known: *Ochthebius batesoni* Blair*, *Galapagodaenum darwini* (Blair*), *Enochrus* (*Lumetus*) *waterhousei* Blair* and *obscurus* (Sharp), *Tropisternus* (*Pristotemus*) *lateralis* (Fabricius)].

However, it is instructive to compare the Oceanic species with those of Papua and New Caledonia, as well as with the more southern antarctic or sub-antarctic faunas in New Zealand, the Kermadec Islands, and other still more southern islands. The four following tables are therefore given.

Table 2. Papuan Palpicornia

Species	New Guinea	New Britain (Neu Pommern)
Hydrophilidae (s. str.)		
Sphaeridiinae		
Coelostoma afflatum Knisch	*	
Coelostoma fabriciusi (Montrouzier) (orbiculare Heller)	×	
Dactylosternum abdominale (Fabricius)	×	
Dactylosternum dytiscoides (Fabricius)	×	
Sphaeridium flavomaculatum A. d'Orchymont	*	
Cercyon afflatus Knisch		*
Cercyon cognatus Knisch		*
Cercyon papuensis A. d'Orchymont	*	
Pelosoma eremita Knisch		*
Hydrophilinae		
Helochares (Hydrobaticus) expansus Knisch	*	
Helochares (s. str.) taprobanicus Sharp (atropiceus Régimbart)	×	
Sternolophus (Neosternolophus) tenebricosus Blackburn	×	
Hydrous (s. str.) gebieni Knisch	*	
Hydrous (s. str.) loriai (Régimbart)	*	
Amphiops duplopunctatus Blackburn	×	
Globaria bedeli (Kraatz)	*	

Table 3. New Caledonian Palpicornia

Species	New Caledonia proper	Art	Nou	Isle of Pines	Lifou (Loyalty)
Hydraenidae					
Hydraeninae					
Hydraena (s. str.) densa Fauvel	*				
Hydraena (s. str.) princeps Fauvel	*				
Spercheinae					
Spercheus platycephalus MacLeay (mulsanti Perroud, priscus Sharp)	×		×		
Hydrophilidae (s. str.)					
Sphaeridiinae					
Coelostoma fabriciusi (Montrouzier)	×				
Dactylosternum abdominale (Fabricius) (Coelostoma insulare Castelnau)	×			×	
Dactylosternum auripes Fauvel	*				*
Dactylosternum helleri A. d'Orchymont	*				
Cercyon inquinatus Wollaston[9]	×				
Hydrophilinae					
Paracymus pygmaeus (MacLeay) (metallescens Fauvel)	×				
Laccobius elevatus Fauvel	*				
Helochares (Crephelochares) nitescens (Fauvel)	×				
Helochares (s. str.) foveicollis (Montrouzier)		*			
Enochrus (Lumetus) artensis (Fauvel)	×	×		×	
Enochrus (Lumetus) caledonicus (Fauvel)	*				
Enochrus (Lumetus) pullus (Fauvel)	*				
Sternolophus (Neosternolophus) artensis (Montrouzier)	×	×			×
Hydrous (s. str.) australis (Montrouzier)	*	*		*	
Hydrous (s. str.) brevispina (Fairmaire)	×				
Berosus (s. str.) distigma Fauvel	*				
Berosus (Enoplurus) albipes Fauvel			×		
Berosus (Enoplurus) australiae Mulsant and Rey	×				

[9] Immigrant, according to Fauvel. Described from Madeira Island.

Table 4. New Zealand Palpicornia

Species	North Island	South Island	Kermadec (Sunday)	Bounty Island	Auckland (Main Island & Enderby)
Hydraenidae					
Hydraeninae					
*Orchymontia spinipes Broun (1919) (Hydraenodes spinipes Broun, 1921)[10]		*			
Hydrophilidae (s. str.)					
Sphaeridiinae					
(Rygmodini)					
*Horelophus walkeri A. d'Orchymont		*			
*Cylomissus glabratus Broun		*			
*Exhydrus flavicornis (Broun)	*				
Exhydrus gibbosus (Broun)	*				
*Stygnohydrus basalis Broun, in litt. Nom. nov.[11] (Tormus nitidus Broun)		*			
Stygnohydrus femoralis Broun	*				
Stygnohydrus nitidus Broun		*			
Stygnohydrus posticalis Broun		*			
*Tormus helmsi Sharp		*			
*Hydrostygnus bifoveatus Broun	*				
Hydrostygnus frontalis (Broun) (brouni Sharp)	*				
Hydrostygnus minor Broun	*				
*Tormissus linsi (Sharp)	*	*			
Tormissus magnulus Broun					
Tormissus marginatus Broun	*[12]				
*Thomosis guanicola Broun				*	
*Rygmodus alienus Broun		*			
Rygmodus cyaneus Broun		*			
Rygmodus femoratus Sharp		*			

[10] Broun's manuscript with the name *Hydraenodes spinipes* was sent to press in New Zealand in 1916 but was not published until 1921 (4), after Broun's death. Meanwhile, unknown to the New Zealand publisher, the corrected name, *Orchymontia spinipes*, had been published in Belgium (3, p. 108).

[11] According to Broun (letter dated March 6, 1916), *Tormus nitidus* Broun, 1893, no. 2445, belongs to *Stygnohydrus*. He proposed to alter the specific name to *S. basalis* because of the older homonym *S. nitidus* Broun, 1893, no. 2343.

[12] Mokohinou Island (Auckland province).

Table 4. New Zealand Palpicornia—Continued

Species	North Island	South Island	Kermadec (Sunday)	Bounty Island	Auckland (Main Island & Enderby)
Rygmodus incertus Broun	*				
(= modestus teste Sharp ?)					
Rygmodus limbatus Broun		*			
Rygmodus modestus White	*	*			
Rygmodus nigripennis Broun		*			
Rygmodus opimus Broun		*			
(unguicularis Sharp)					
Rygmodus ovalis Sharp[13]		*			
Rygmodus puncticeps Broun		*			
Rygmodus tibialis Broun		*			
*Saphydrus antennatus Sharp		*			
Saphydrus collaris Broun	*				
Saphydrus consonus Broun		*			
Saphydrus longulus Sharp		*			
Saphydrus monticola Broun	*				
Saphydrus obesus Sharp		*			
Saphydrus oblongus (Broun)	*				
Saphydrus suffusus Sharp		*			
*Adolopus australis Broun		*			
Adolopus badius (Broun)[14]	*				
(Cyloma altulum Broun)					
Adolopus convexus Broun		*			
Adolopus helmsi Sharp	*	*			
Adolopus montanus Broun		*			
Adolopus rugipennis Broun	*				
Adolopus tibialis Broun		*			
Adolopus vicinus Broun	*				
*Gitocyloma nigratus Broun		*			

[13] According to Broun (1893), *Rygmodus ovalis* Sharp, 1884, is "extremely like no. 1346 (*puncticeps* Broun, 1883)". I have compared a male of *R. puncticeps* (Canterbury Museum, Christchurch, New Zealand, 6.8 x 3.6 mm) with a male paratype of *R. ovalis* (5.8 x 2.9 mm) and am inclined to think that *R. ovalis* is a variety of *R. puncticeps*; more specimens, however, must be examined before a decision can be made.

[14] An immature specimen in the Canterbury Museum, identified by F. W. Hutton, bears on the label, correctly I think, "*Adolopus badius*". *Cyloma altulum* Broun, 1880, no. 158, was transferred to *Adolopus* by Broun himself in 1893. Of this *altulum* he said "very similar to the preceding" (*badium* Broun, 1880, no. 157). The latter belongs thus also to *Adolopus* and seems, moreover, to have been established on two immature specimens; the name has priority over *altulum*.

Table 4. New Zealand Palpicornia—Continued

Species	North Island	South Island	Kermadec (Sunday)	Bounty Island	Auckland (Main Island & Enderby)
*Cyloma guttulatus Sharp		*			
Cyloma lawsonus Sharp	*				
Cyloma stewarti Broun	*				
Cyloma thomsonus Sharp		*			
*Psephoboragus dispar Broun	*				
Psephoboragus lineatus Broun		*			
Psephoboragus signatus Broun	*				
*Namostygnus pictus (Kirsch) (rufipes Broun)					*
Sphaeridiinae (Sphaeridiini and Cercyonini)					
Dactylosternum marginale (Sharp)	*				
Cercyon (s. str.) haemorrhoidalis (Fabricius)[15]	×	×			
Cercyon (Paracercyon) analis (Paykull)[16]	?	?			
*Cercyodes laevigatus Broun	*[17]				
Hydrophilinae					
Paracymus pygmaeus (MacLeay) (Hydrobius nitidiusculus Broun)	×				
Limnoxenus zelandicus (Broun) (Hydrobius assimilis Sharp, 1884, non Hope, 1842)	×				
Laccobius arrowi A. d'Orchymont		*			
Enochrus (Lumetus) abditus (Sharp)	*				
Enochrus (Lumetus) tritus (Broun) (Philhydrus variolosus Broun)	×	×	×		
Berosus (*Phelerosus) pallidipennis (Sharp) (Berosus mergus Broun)[18]		*			

[15] Immigrant.

[16] Immigrant (according to specimens without locality label in the Hutton Collection, Canterbury Museum).

[17] Only at Mokohinou Island (Auckland province).

[18] Synonymy established according to a manuscript letter of Broun, dated July 8, 1918: "*Phelerosus pallidipennis* Sharp was published before my *Berosus mergus*, but I did not, out here, see his description in time to stop the publication of mine, so I presume *B. mergus* is only a synonym of *P. pallidipennis*."

The fauna of South Island seems richer (37 species) than that of North Island (29 species) so far as Palpicornia are concerned. Only *Rygmodus modestus, Adolopus helmsi, Cercyon haemorrhoidalis* (immigrant) and *Enochrus tritus* are common to both islands. I am acquainted with one more undescribed Rygmodini-genus and species from the Auckland Islands. The antarctic *Meropathus chuni* Enderlein (Hydraeninae), endemic to Kerguelen Island, is not included in the above list. The affinities of this beetle, which I have not seen, seem to be with some recently described Australian Ochthebii (by C. Deane).

Table 5 shows how much richer New Zealand is in Palpicornia than the other regions studied. This is undoubtedly due to the fact that New Zealand possesses the ancient Rygmodini group of Sphaeridiinae, known to occur elsewhere only in Australia (*Pseudohydrobius, Rygmostralia,* both endemic) and in Chile (*Cylorygmus,* endemic), and to the fact that the New Zealand Coleoptera have been assembled and thoroughly studied by Broun. However, since several of his species are based on uniques[19] and only two endemic species are recorded as existing simultaneously in the two main islands, further collecting may prove that some of his species are but subspecies or varieties of older species from the same region.

Table 5. Comparison of Oceanic Palpicornia Faunas

	Genera and Subgenera		Species	
Faunas	Total	Endemic	Total	Endemic
1 Oceanic proper	14	1	23	7
2. Papuan	11	0	16	10
3. New Caledonian	14	0	21	9
4. New Zealand with Auckland and Bounty	26	19	64	59

I may add some remarks as to affinities or distribution of some of the species of Oceania proper. *Omicrus brevipes* Sharp is endemic in Hawaii; the genus, however, occurs also in South America, in Central America (*Perochthes* Sharp), and in the southern United States, whence it was redescribed by G. H. Horn as *Phaenotypus. Dactylosternum subquadratum* and *superficiale, Noteropagus, Hydrobaticus, Helochares* (s. str.), and *Methydrus* have western affinities

[19] For this reason I have seen only a few of them.

(with Indo-Malayan fauna). The Oceanic *Asiobates, Coelostoma, Neosternolophus,* and *Hydrous* are rather related to the species of Australia and New Caledonia. A species of *Limnoxenus* (very near to the Hawaiian *semicylindricus* and perhaps to *nesiticus*) occurs simultaneously in Australia and in North Island, New Zealand. But the species of the world-wide genus *Enochrus,* which is found in several islands, are too uniform and their aedeagus is too "neutral" to be a safe guide for solving problems of zoogeographical distribution. Finally the absence of any known *Hydraena* in the Oceanic fauna seems surprising and may be attributed perhaps to insufficient collecting.

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12. Krone, Hermann, Die Käferfauna der Auckland-inseln: Deutsche Ent. Zeit., 21, 1877.
13. Orchymont, Armand d', Neue oder interessante Sphaeridiinen und Hydrophilinen der Malayischen Region: Treubia, **3**: 419-420, 1923 [*Helochares taprobanicus* and *Sternolophus tenebricosus* in New Guinea].

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