

## A NEW SPECIES OF *DIXA* FROM PENINSULAR THAILAND (DIPTERA: DIXIDAE)

By **Wesley R. Nowell**<sup>1</sup>

*Abstract.* Both sexes of *Dixa* (*Dixella*) *pollex*, n. sp., from peninsular Thailand are described and illustrated. This is the only species of this family and genus known from Thailand. A key to adults of the 15 species of *Dixa* now known from the Oriental Region is included.

A new species of the genus *Dixa*, subgenus *Dixella*, was discovered in a series of 17 specimens collected by L. W. Quate in Narathiwat Province, Thailand, in 1965. All of the specimens were taken at a location 15 km W of Waeng, at 100 m elevation. Waeng is 5 km from the southeastern Malaysia/Thai border and the collection point was at a tributary of the Khlong Sai Buri in a mountainous area midway between Waeng and the western Malaysia/Thai border.

A total of 15 species of Dixidae is now known from the Oriental Region. The majority of the species (12) occur in India; the remaining are from Sri Lanka (Ceylon), Indonesia and Thailand. One species was collected from both Sri Lanka and India and another was taken in India and Tibet. The new species described below is the only one known from Thailand and it is hoped that this note will stimulate further collection efforts for members of the family in SE Asia.

The most recent catalog of the Oriental species of Dixidae was compiled by Stone (1973). The following key to the adult forms is based on that of Edwards (1934).

### KEY TO THE ORIENTAL SPECIES OF *Dixa*

- |  |                              |
|--|------------------------------|
| 1. First flagellar segment of antenna short (4-6× as long as broad), fusiform .....          | 2                            |
| First flagellar segment long (10-15× as long as broad), terete .....                         | 13                           |
| 2. Wings with elaborate markings or otherwise heavily patterned .....                        | 3                            |
| Wings less extensively marked .....  | 4                            |
| 3. Markings include 2 large dark brown spots completely crossing the upper basal cell .....  |                              |
| ..... <b>maculipennis</b> Brunetti   |                              |
| Wings heavily patterned with light brown; 6 dark streaks on anterior ½ of wing .....         |                              |
| ..... <b>amabilis</b> Alexander  |                              |
| 4. A brown or grayish spot (sometimes faint) in upper basal cell .....                       | 5                            |
| No trace of dark spot in upper basal cell .....  | 7                            |
| 5. Wing-tip darkened; head yellow .....  | <b>ochrilineata</b> Brunetti |
| Wing-tip not darkened; head dark .....   | 6                            |
| 6. A small gray spot towards end of lower basal cell .....                                   | <b>montana</b> Brunetti      |
| No such spot .....   | <b>trinotata</b> Edwards     |
| 7. Vertex blackish, brownish or yellow; proboscis rather long .....                          | 8                            |
| Vertex blackish; proboscis normal .....  | 10                           |
| 8. Thorax ochreous; pleura brown on upper ½ with large dull black area occupying mesepimeron |                              |

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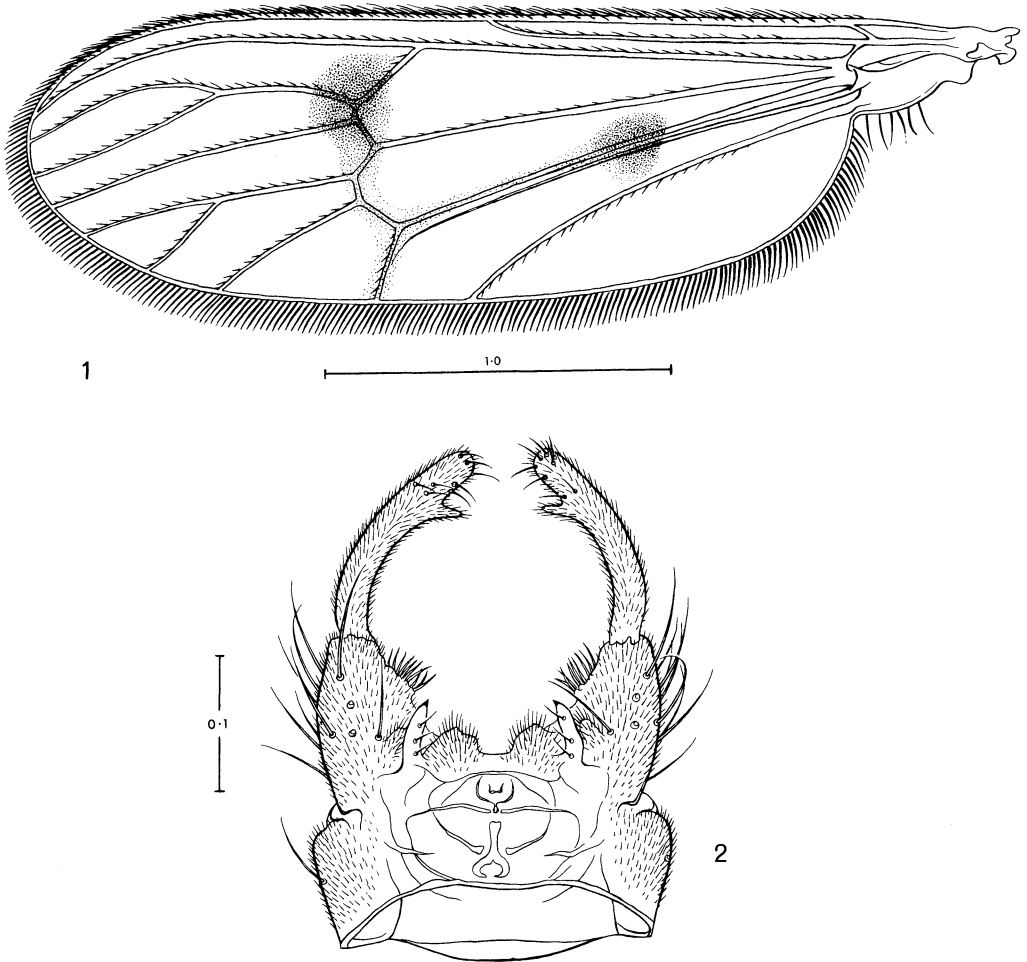


FIG. 1-2. *Dixa (Dixella) pollex*: 1, wing of ♀; 2, ♂ genitalia, dorsal view.

- and extending on to upper part of sternopleura ..... **rostrata** Edwards
- Thorax yellow to yellow-brown, or reddish ..... 9
- 9. Head pale yellowish above; thorax largely yellowish, pleura yellowish brown with black irregular markings ..... **zeylanica** Senior-White
- Head brownish above; thorax reddish yellow, postnotum and upper part of sternopleura blackish ..... **binotata** Edwards
- 10. Thorax almost uniformly blackish; a diffuse gray cloud over crossveins ..... 11
- Thorax with yellowish ground color; a narrow brown streak over crossveins ..... 12
- 11. Upper fork cell shorter than its stem ..... **christophersi** Edwards
- Upper fork cell longer than its stem ..... **platystyla** Edwards
- 12. Streak over crossveins stops before or at the posterior crossvein ..... **bifasciata** Brunetti
- Streak over crossveins continues narrowly to the posterior margin of the wing .. **bistriata** Brunetti
- 13. Wings with spotting or clouds ..... 14
- Wings clear, with no trace of spots or clouds ..... **barraudi** Freeman

14. Wings almost clear, but with small brown spot over r-m; Sc ending above base of Rs ..... *kashmirensis* Edwards  
 Wings with 2 brown clouds; Sc ending well behind base of Rs ..... *pollex*, n. sp.

**Dixa (Dixella) pollex** Nowell, new species

FIG. 1-2

♂ ♀. *Head* brownish and shining, face and mouthparts brown; maxillary palpi brown; eyes large and black; antennae elongate, uniformly brown,  $\frac{1}{2}$  as long as entire insect; pedicel tan and globular, flagellar segments narrow and cylindrical; 1st flagellar segment long, 11-13 $\times$  as long as wide; 2nd segment elongate, more than  $\frac{1}{2}$  as long as 1st, 6-7 $\times$  as long as wide. Ratio of first 3 flagellar segments 2:1:1. *Thorax* brown on dorsum with light brown ventral and lateral surfaces. Pronotum brown; pleura light brown and shining with dark lateral streaks on pre-episternum II and anepimeron II forming a transverse blackish line across the mesopleuron; scutum highly arched and brown with a pair of narrow dark stripes along the dorsal midline becoming one distad to the scutellum; scutellum brown with black stain at posterior base; postnotum brown. *Legs* yellowish brown, darkening at tarsi, with black markings and black claws. Coxae tan to light brown, each pair with black blotches on the tips; trochanters yellowish with blackish striping at tips; femora yellow-brown, the tips swollen and black, with a dark preapical band at center; hind femur with distinct, black distal peg. Tibiae thin, blackish, darker at metatarsal end and only slightly swollen at the tips; tip of hind tibia flattened and spade-shaped, black, and with a subapical comb of prominent setae on the inner surface in both sexes. Metatarsi long, thin, paler than tibiae, hind metatarsus with black ring immediately below tibial end; tarsi dark with terminal segment black. Claws black. Black distal seta at the tip of each segment of the hind tarsus. *Wing* rectangular with rounded base and tip. Main veins brownish, with 2 clouds and venation as in FIG. 1. An irregular but distinct brown patch centered above and surrounding the apex of Rs, not touching R1, and extending along both sides of r-m to M; a circular light brown cloud located midway on Cu, being on both sides of Cu and touching the anal vein. Sc meeting C well short of level of base of Rs; origin of r-m very slightly distal to or at fork of Rs; m-cu about its own length beyond r-m; R2+3 slightly arched with R2 and R3 being nearly parallel; R2+3 shorter than R2 (1:1.4-1:1.5); R4+5 much longer than Rs (1:3.3); stem of 2nd posterior cell equal to M1+2; 2nd posterior cell longer than wide. Halteres strap-shaped, uniformly light brown with touches of black, capitellum black. Wing length 2.6-2.8 mm. *Abdomen* dark brown to blackish on dorsum, segments dark brown with light apical margins on ventral side. ♂ hypopygium as in FIG. 2. Basistyle a short, inwardly curved and inflated cylinder, about 0.13 mm long by 0.05 mm wide, with a few long hairs on the outer surface and produced at the apex into a flat collar for the dististyle; subapical process a short, indistinct lobe with a cluster of 6-9 heavy, long setae; basal process small and not well differentiated. Dististyle slightly longer (1:1.2) than basistyle, appearing as an elongate, gently inward-curving, strap-shaped bar with a blunt, rounded tip and having a fingerlike projection about  $\frac{1}{3}$  basad from the tip and on the inside margin; tip with 5-8 medium long setae, all projecting inward. Cerci of ♀ as wide as abdomen, black, and drawn together to form an elongated point. Body length 3.6-4.0 mm.

*Larva and pupa.* Unknown.

*Type data.* Holotype ♂ (BISHOP 11,446), with genitalia and wing slides, THAILAND: Narathiwat Prov., 15 km W of Waeng, 100 m, 7-11.IX.1965, L.W. Quate. Allotype ♀ (BISHOP), with wing slide, same data as holotype. Paratypes, 10♂, 5♀, same data as holotype. All specimens deposited in the Bishop Museum (BISHOP).

*Systematics.* This description is based on a series of 11♂ and 6♀ specimens collected from a single location. All of the specimens are similar and the species is distinctive. This species is 1 of 3 in the subgenus *Dixella* known from the Oriental Region. It is separated from *D. (D.) barraudi* Freeman by the darker color of the thorax, by the presence of wing markings, and by the venation. *D. (D.) pollex*, n. sp., can be separated from *D. (D.) kashmirensis* Edwards by the narrower 1st flagellar segment and longer 2nd segment, which in *kashmirensis* is less than  $\frac{1}{2}$  the length of the 1st, by a darker scutellum, and by the presence of 2 brown clouds on the wing.

The specific name is from the Latin *pollex* = thumb, and refers to the mittenlike appearance of the distal end of the ♂ dististyle.

*Distribution.* Known only from peninsular Thailand.

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