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AN ILLUSTRATED KEY TO THE IDENTIFICATION OF SCORPIONS (SCORPIONIDA : ARACHNIDA) OF KERALA AND NOTES ON SOME INTERESTING NEW RECORDS

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INTRODUCTION

Scorpions are venomous terrestrial arachnids placed under the order Scorpionida. They represent one of the oldest arthropod groups that underwent very little changes during the course of evolution. They are notorious for their poisonous sting, though venom of only a few species is lethal to man. Scorpions are found all over the world except in some cold northern countries and are common in tropical and subtropical areas. Their diversity is more in desert regions of the world. They are strictly nocturnal in habits and hide under stones, barks, thin crevices and burrows and occasionally in dark corners of houses. Scorpions are restricted to carnivorous food habits and feeding mainly on soft-bodied insects.

Pocock (1900) provided a comprehensive account on the scorpion fauna of British India including Sri Lanka and Myanmar. Later, Tikader and Bastawade (1983) updated the knowledge of Indian scorpions by providing detailed taxonomic account of 99 species belonging to 18 genera under 5 families viz. Buthidae, Charilidae, Scorpionsidae, Ischnuridae and Scorpionidae. They also provided information on the origin, habits, habitats, as well as the reproductive and feeding behaviors of scorpions. Three new species were later added to the Indian fauna (Bastawade, 1986a,b, 1992) and currently there are 102 species of scorpions known from India.

The scorpion fauna of Kerala is poorly known. According to Tikader and Bastawade (1983) and Indra (2001) 15 species of scorpions under 7 genera and three families (Buthidae, Ischnuridae and Scorpionidae) are known from Kerala. Based upon the study of the scorpion collections in Zoological Survey of India, Calicut, two interesting records of scorpion species from Kerala are provided here. The species *Chiromachetes fergusonii* Pocock is being reported here again, from

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Kerala, after its original description in 1899 and *Heterometrus (Chersonesometrus) kanaraensis* (Pocock) for the first time from the state. As an aid to the identification of the 16 scorpion species presently known from Kerala an illustrated key is also prepared.

KEY TO THE SCORPION SPECIES REPORTED FROM KERALA

Key to families

1. Legs furnished with two pedal spurs (Fig. 1); trichobothrial pattern 'A' type (Figs. 3, 4 showing manus and immovable finger of pedipalp); pedipalps with slender hands and chelae comparatively narrow (Figs. 15, 24, 26, 36); pectines generally long and provided with numerous teeth; cephalothoracic sternum triangular and narrowed in front (Figs. 17, 21, 31). Family BUTHIDAE 3
 - Legs furnished with single pedal spur (Fig. 2); trichobothrial pattern 'C' type (Figs. 7, 8); pedipalps with hands not slender and chelae not narrow; pectines short and number of teeth not numerous; sternum pentagonal 2
2. Hands of pedipalp flat (Figs. 38, 41, 46); Tail weak and compressed, telson small with shorter weak aculeus; tarsomere II without ventral spines and lateral distal margins truncate, forming almost a right angle with the base of the claw-lobe and not overlapping the claws on sides (Fig. 9); cutting edges of fingers of chela evenly granular, dentate and not produced into sharp triangular teeth; manus and fingers with strong and complete carina; movable and immovable fingers of chelicera smooth without teeth on ventral surface. Family : ISCHNURIDAE 8
 - Hands of pedipalp not flat; tail powerful and not compressed, telson strong; tarsomere II with short spines on ventral surface, lateral distal margins produced into a rounded lobe, overlapping the base of claw and forming a very acute angle with base of the claw lobe (Fig. 10); cutting edges of fingers of chela armed with strong triangular pointed teeth; manus and fingers with carina not strong and complete, chelicera with three teeth on dorsal fang of movable finger. Family SCORPIONIDAE 11

Famly BUTHIDAE

Key to Subfamilies, genera, subgenera and species

3. III and IV pair of legs always furnished with a tibial spur. Subfamily BUTHINAE 4
 - III and IV pair of legs without tibial spur. Sub family CENTRURINAE (Only one genus known from Kerala : *Isometrus* Hempr. & Ehrenb : Mesosomal tergites monocarinated; interior space of cheliceral fixed finger with one tooth; sternum small, triangular; caudal region slender; vesicle with a strong triangular sub aculear spine at the base of aculeus; tarsomere I not depressed and fringed with setae; trichobothria *d1*, *d3* and *d4* on femur forming β angle (Fig. 37) 7

4. Immovable finger of chelicerae furnished below with one minute tooth (Fig. 12); carapace with weak posterior median or lateral carinae (Fig. 13); mesosomal tergites with two or three carinae; cephalothoracic sternum triangular and longer than wide (Fig. 17, 21); metasomal tergites carinated and vesicle elongated with a conspicuous triangular sub aculear spine below the vesicle (Fig. 14); dentition on fingers of pedipalp non imbricated (Fig. 16); trichobothria *d1*, *d3*, and *d4* on femur form β angle (Fig. 20). Genus *Lychas* Koch 5
- Immovable finger of chelicerae always furnished below with two minute teeth (Fig. 11); carapace not carinated; mesosomal tergites monocarinated (Fig. 28); cephalothoracic sternum small, pentagonal and wider than long (Fig. 31); metasomal tergites weakly carinated and vesicle small and round without sub aculear spine (Fig. 29); granular rows of teeth on pedipalp fingers imbricated (Fig. 27); trichobothria *d1*, *d3*, and *d4* on femur form α angle (Fig. 30). Genus *Charmus* Karsch (Only one species known from Kerala : *Charmus indicus* Hirst. : Entire surface of carapace and mesosomal tergites weakly but less sparsely granular on lateral portion; colour dark black (Fig. 26); tergites I–VI with a pair of conspicuous >>–<< shaped yellow marks; pectines 4 times longer than wide; teeth number 17/17. metasomal segment IV short; anal rim smooth).
5. Trichobothria *db* is proximal to *et* only (on immovable finger of pedipalp) (Fig. 18). Subgenus *Alterotrichus* (Only on species known from Kerala : *Lychas (Alterotrichus) hendersoni* Pocock : Colour very dark brownish black (Fig. 15); posterior central carinae on carapace weakly developed; pedipalp slender with longer fingers; outer row of teeth on movable finger do not have unpaired teeth; pectines 4 times longer than wide; pectinal teeth, tubular, 17/18 in number, never above 20 (Fig. 17); sternum small, triangular with a median longitudinal depression; metasoma with telson shorter than segment V; aculeus long, slightly shorter than vesicular length, not much curved, sharp and dark on distal portion. (Fig. 14).
- Trichobothria *db* is proximal to *et* and *est* (Fig. 23). sub genus *Endotrichus* 6
6. Colour brownish, variegated with yellow patches; entire surface of carapace weakly granular; anterior margin smooth, slightly invaginated; pedipalp slender, blackish brown in colour except yellow manus (Fig. 24); femur as long as carapace, carinae weakly developed; pectines 4 times longer than wide, pectinal teeth 21/21 in number; genital operculum sclerites weak, not pointed on latero median portion (Fig. 25); mesosomal tergites II–IV with one carina; *eb* and *esb* placed at distal from the base of the immovable finger (Fig. 23)
.....*Lychas (Endotrichus) albimanus* Henderson
- Colour brownish yellow; entire surface of carapace coarsely granular; anterior margin crenulated, weakly invaginated; pedipalp different; femur shorter than carapace and carinated; pectines 5 times longer than wide, pectinal teeth 23/23 in number; genital operculum with two sclerites pointed on latero median portion, united in the middle (Fig. 21); mesosomal tergites II–IV with three carinae; *eb* and *esb* placed closer to the base of the immovable finger (Fig. 22) *Lychas (Endotrichus) tricarinatus* Simon

Subfamily CENTRURINAE

Key to subgenera and species

7. *Trichobothria db* placed always proximal to *et* but distal to *est* (Fig. 34); vesicle is not much bulbous. Sub genus *Reddyanus* (Only one species known from Kerala : *Isometrus (Reddyanus) brachycentrus* Pocock : Metasoma 6x as long as carapace; sub aculear spine provided with three pairs of small denticulate granules on inner margin (Fig. 32) ; manus of pedipalp granular and strongly carinated (Fig. 33); (medium size, colour dark brown, dark black in metasoma).
- *Trichobothria db* placed always distal to *et* (Fig. 35); vesicle is more bulbous. Subgenus *Closotrichus* (Only one species known from Kerala : *Isometrus (Closotrichus) sankeriensis* Tikader & Bastawade : Delicate slender white scorpions (Fig. 36); body variegated with black to brown bands and spots; pedipalp slender long, variegated with dark colour; manus with both fingers longer than carapace; vesicle globular, elongate as wide as caudal segment V; aculeus normally curved, sharp, pointed with setations.

Family ISHNURIDAE

Key to Genera, Subgenera, species and sub species

8. Tarsomere II furnished on ventral surface with few delicate spicules on sides and few small median spicules only on proximal portion. Genus *Chiromachetes* Pocock : (Median eye situated anteriorly in the ratio 1 : 2; three lateral eyes, anterior two separated by a very narrow space from the edge but posterior practically in the edge; dentition on fingers of pedipalp of two rows of small granules) (Only one species known from Kerala; *Chiromachetes fergusonii* Pocock : Carapace entirely smooth and finely punctured; anterior margin with deep medial notch (Fig. 38); all tergites smooth and finely punctured; metasomal segments thin and smooth; pedipalp very strong (Fig. 39) with long femur and manus, fingers scalloped at the base; sternum pentagonal, pectines weakly developed with few teeth (Fig. 40))
- Tarsomere II furnished on ventral surface with few long slender bristles on sides and a median row of small spinules or median portion smooth 9
9. Tarsomere II of legs with a median row of spicules on ventral surface; genital operculum narrowed posteriorly and without a median suture in female (Fig. 43); posterior lateral eye above the margin of the carapace (Fig. 44). Genus *Liocheles* Simon : Only one species *Liocheles laeviceps* known from Kerala (Two trichobothria, *dsb* and *dst* present on dorsal surface of immovable finger of manus (Fig. 45) ; trichobothria *esb1* and *esb 2* and *em1* and *em2* on patella placed closer to each other and in the same plane. trichobothria *est 1* placed distal to *est 2* and *est3* on patella (Fig. 42); trichobothria *Est* on manus placed less distally to *Dt* (Fig. 48) (Two sub species known under the species from Kerala 10

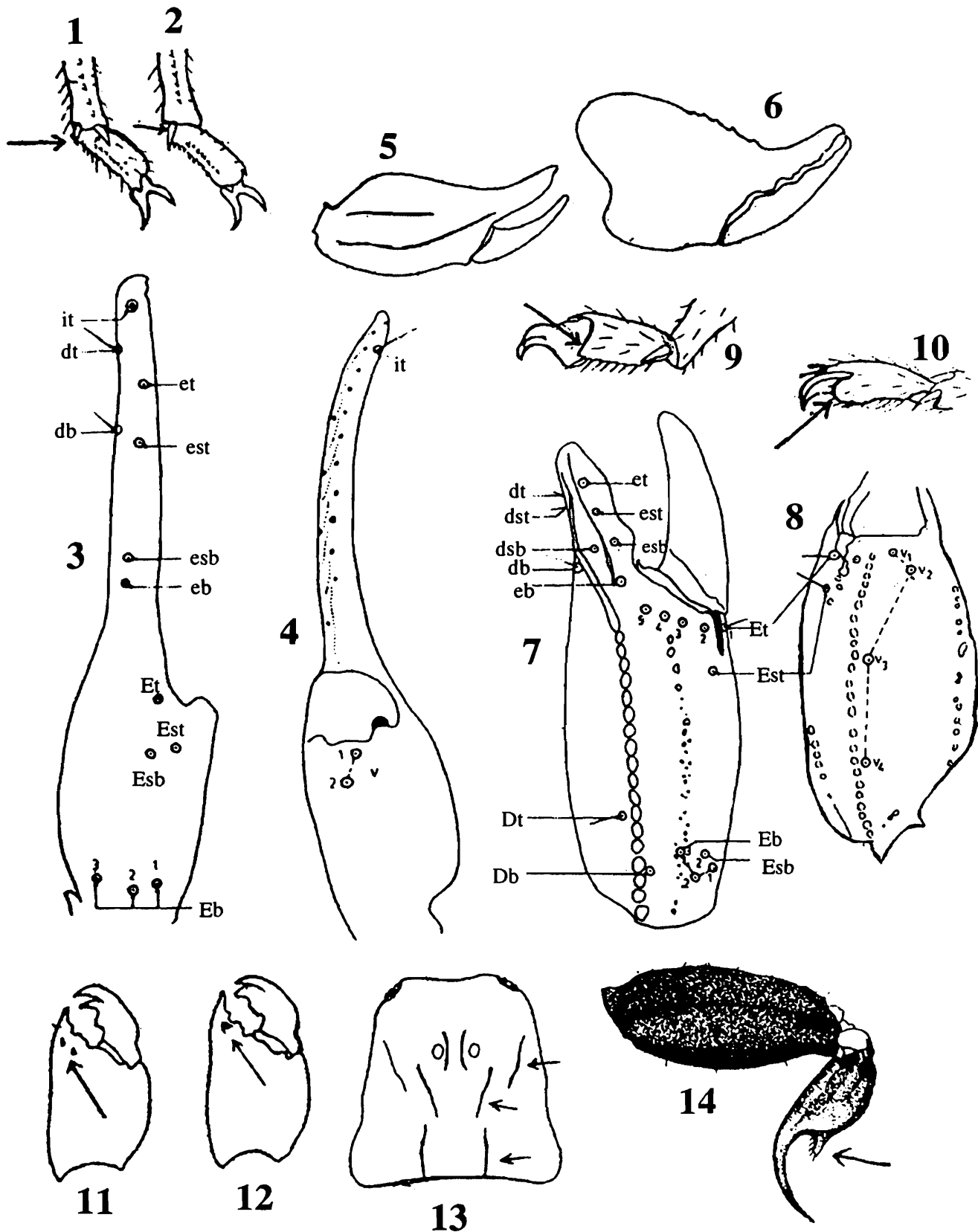
- Tarsomere II without a median row of spicules on ventral surface; genital operculum not narrowed posteriorly and with a median suture in female (Fig. 50). Genus *Hormurus* Thorell (only one species *Hormurus australasiae* (Fabr.) reported from Kerala : Carinae on patella and manus distinct and granular (Fig. 51); anterior or inner surface of patella armed with a strong tuberculate denticle (Fig. 49); trichobothria *Est* on manus placed not much distally to *Dt*; trichobothria *dt* on immovable finger of pedipalp placed closer to *it* (Fig. 53); single inferior median and inferior lateral carinae on metasomal segment regularly crenulate).
10. Carinae on patella of pedipalp smooth and obsolete; the trichobothria on patella in the group *eb1-5* placed more closer (Fig. 42) *Liocheles (laeviceps) laeviceps* (Pocock)
- Carinae on patella of pedipalp distinct and weakly crenulated, the trichobothria on patella in the group *eb 1-5* placed more sparsely (Fig. 47)
..... *Liocheles (laeviceps) malabarensis* (Pocock)

Family SCORPIONIDAE

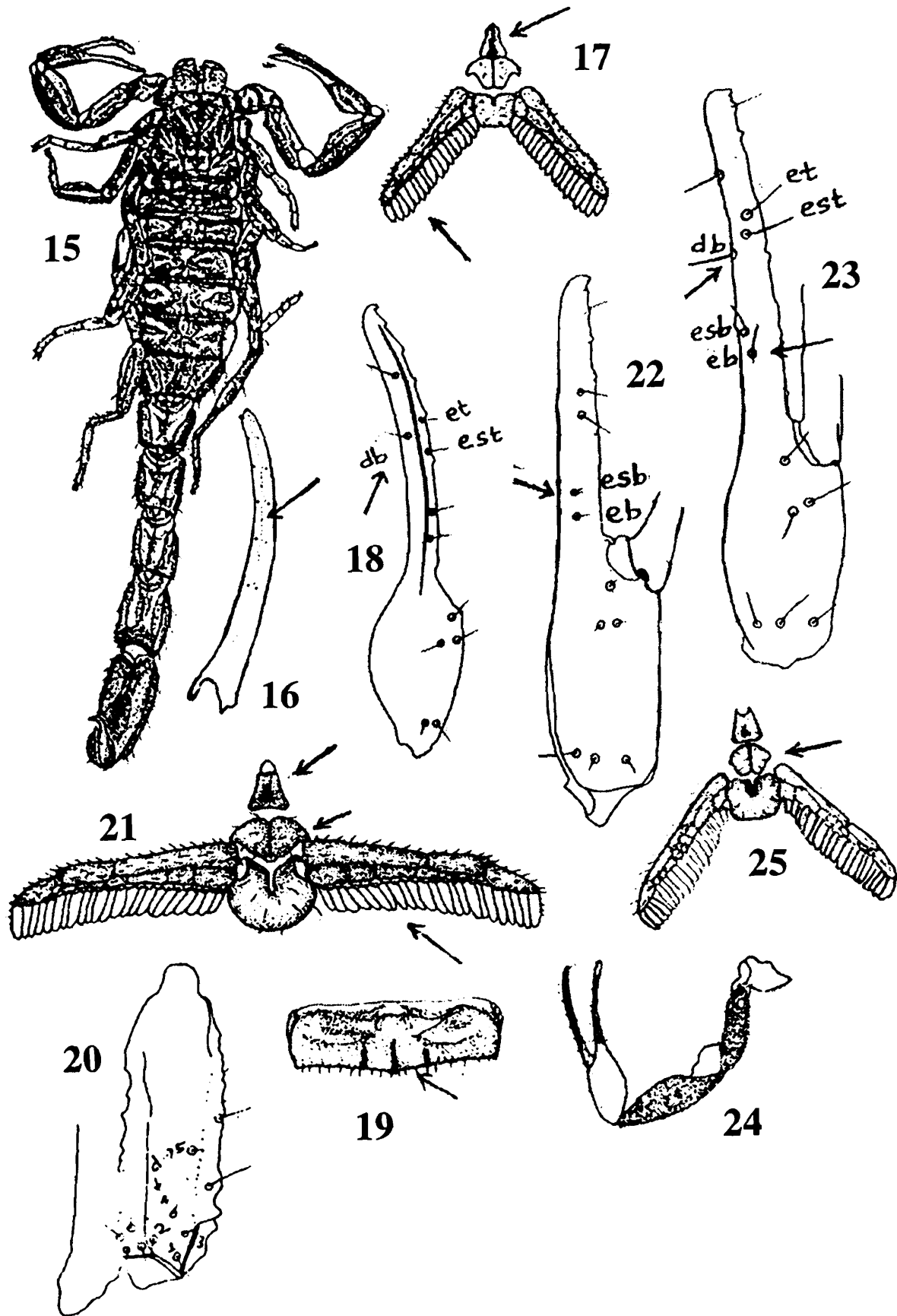
Key to Subgenera and species

11. (Only one subfamily Scorpioninae and one genus *Heterometrus* Hemp. & Ehrenb. : Anterior margin of carapace deeply notched in the middle portion; tarsomere II furnished with two rows of stout spines on ventral portion. A stridulatory organ situated between the chela and first leg; ventral surface of patella of pedipalp furnished only with three trichobothria (Fig. 60)
- Rostrolateral margin of carapace with distinct incision next to the posterior lateral eyes; manus of pedipalp longer than wide (Fig. 54) (except species *malapuramensis*) smooth or very poorly granulate on dorsal surface; superciliary crest present, (Subgenus *Heterometrus*) 12
 - Rostrolateral margin of carapace continuous, without incision next to the posterior lateral eyes; manus of pedipalp wider than long or as long as wide, granular and carinated on dorsal surface. Superciliary crest may or may not be present..... 13
12. Manus of pedipalp distinctly longer than wide (Fig. 54); patella of pedipalp shorter than femur; metasomal segment V narrowed and almost straight on lateral portion (Fig. 55); femur of pedipalp always longer than carapace; trichobothrial group including *esb*, *em* and *est* on patella placed sparsely (Fig. 57); middle portion of carapace almost smooth but weakly granular on lateral portion; all the lateral eyes are of same size (Fig. 56); pectinal teeth 19/19 *Heterometrus (Heterometrus) keralaensis* Tikader & Bastawade

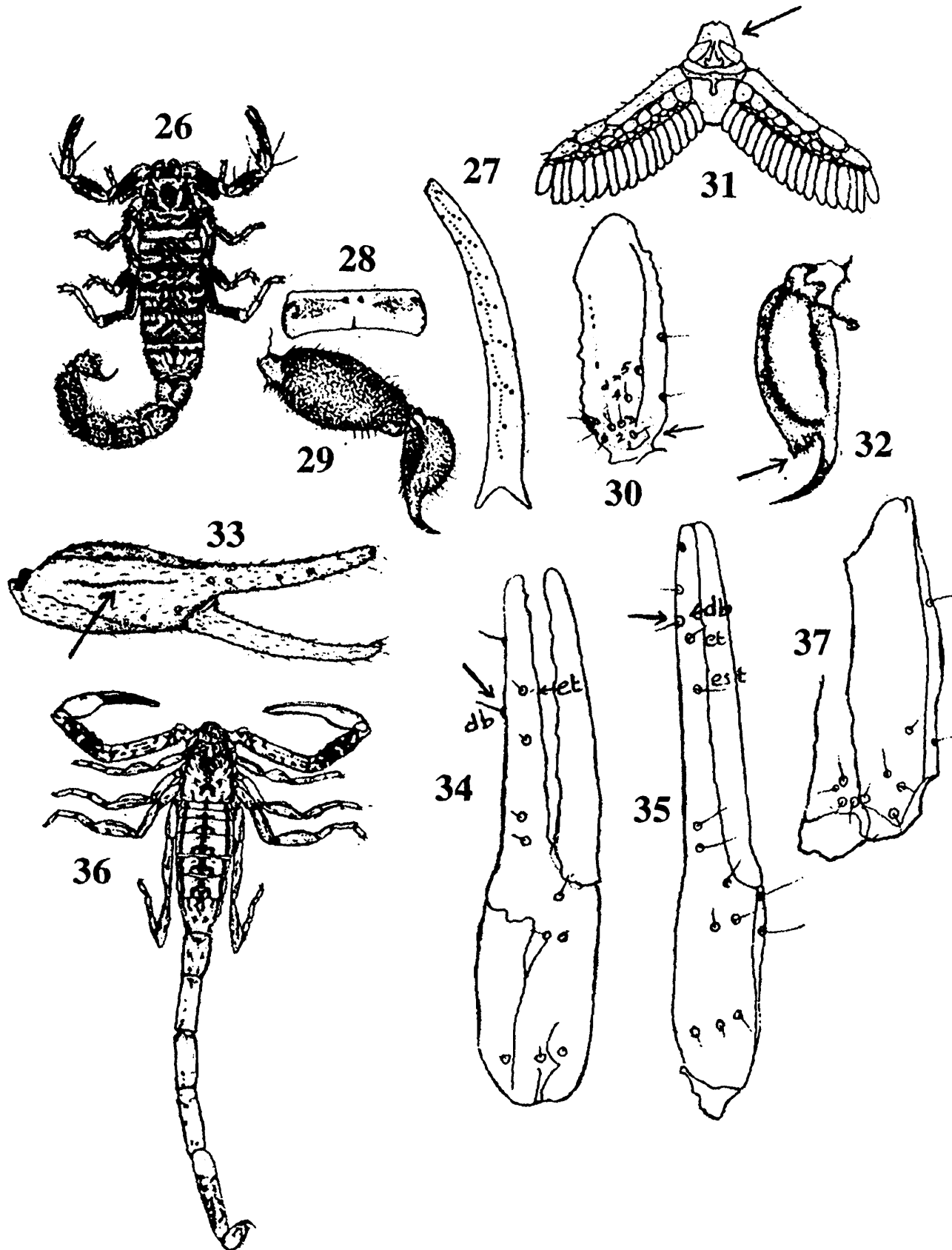
- Manus of pedipalp not distinctly longer than wide (Fig. 58); patella of pedipalp slightly longer than femur; metasomal segment V not much narrowed and lateral sides slightly convex and bulging (Fig. 59); femur of pedipalp always shorter than carapace; trichobothrial group including *esb*, *em* and *est* on patella placed closer to each other (Fig. 62); carapace and mesosomal tergites entirely coarsely granular; first and second lateral eyes larger than the third (Fig. 61); pectinal teeth 11/11 in number
..... *Heterometrus (Heterometrus) malapuramensis* Tikader & Bastawade
- 13. Superciliary crest on carapace almost absent; manus of pedipalp wider than long, almost thickly granular and sometimes with prominent carinae (Figs. 63, 64); immovable finger of pedipalp with smooth distinct carina. Sub genus *Srilankametrus* Only one species known from Kerala : *Heterometrus (Srilankametrus) gravimanus* (Pocock) : Manus of pedipalp fully granular on dorsal surface but granules smooth and obsolete, distal carina distinct but weakly granular and granules not separated, continued on immovable finger; trichobothria V3 and V4 placed closer on manus (Fig. 66); trichobothria *em2* placed distal to *em1* on patella (Fig. 65)
 - Superciliary crest on carapace present; manus of pedipalp as long as wide or wider than long and carinated (Figs. 67, 69, 72), granular and sometimes granular carinae distinct or smooth, short ridges also present; immovable finger of pedipalp with or without carina. Subgenus *Chersonesometrus* (the ratio of ventral length as to maximum width of manus of pedipalp is 0.8–1.00) granulated and carinated on dorsal surface; superciliary crest present, but granular only on anterior portion; the ratio of total length of metasomal segments I–V as to the length of only metasomal segment V is 3.3–3.6) 14
- 14. Dorsal surface of manus entirely coarsely granular (Fig 67); pattella of pedipalp as long as femur; trichobothria V3 & V4 of manus placed away (Fig. 68)
..... *Heterometrus (Chersonesometrus) granulomanus* Couzijn
 - Dorsal surface of manus smooth or very weakly covered with short smooth mosaic ridges; pattella longer than femur; trichobothria V3 & V4 of manus placed closer (Fig. 74) 15
- 15. Femur of pedipalp always longer than carapace (Fig. 71) ; metasomal segments I & II longer than wide; pectinal teeth well developed, not much tapering, 9/9 in number in female and 11/11 in male (Fig. 73) *Heterometerus (Chersonesometrus) kanaraensis* (Pocock)
 - Femur of pedipalp shorter than carapace (Fig. 69) ; metasomal segments I & II wider than long; pectinal teeth weakly developed, much sparsely arranged, tapering on distal portion and 12/12 in number in female (fig. 70)
..... *Heterometerus (Chersonesometrus) scaber* (Thorell)



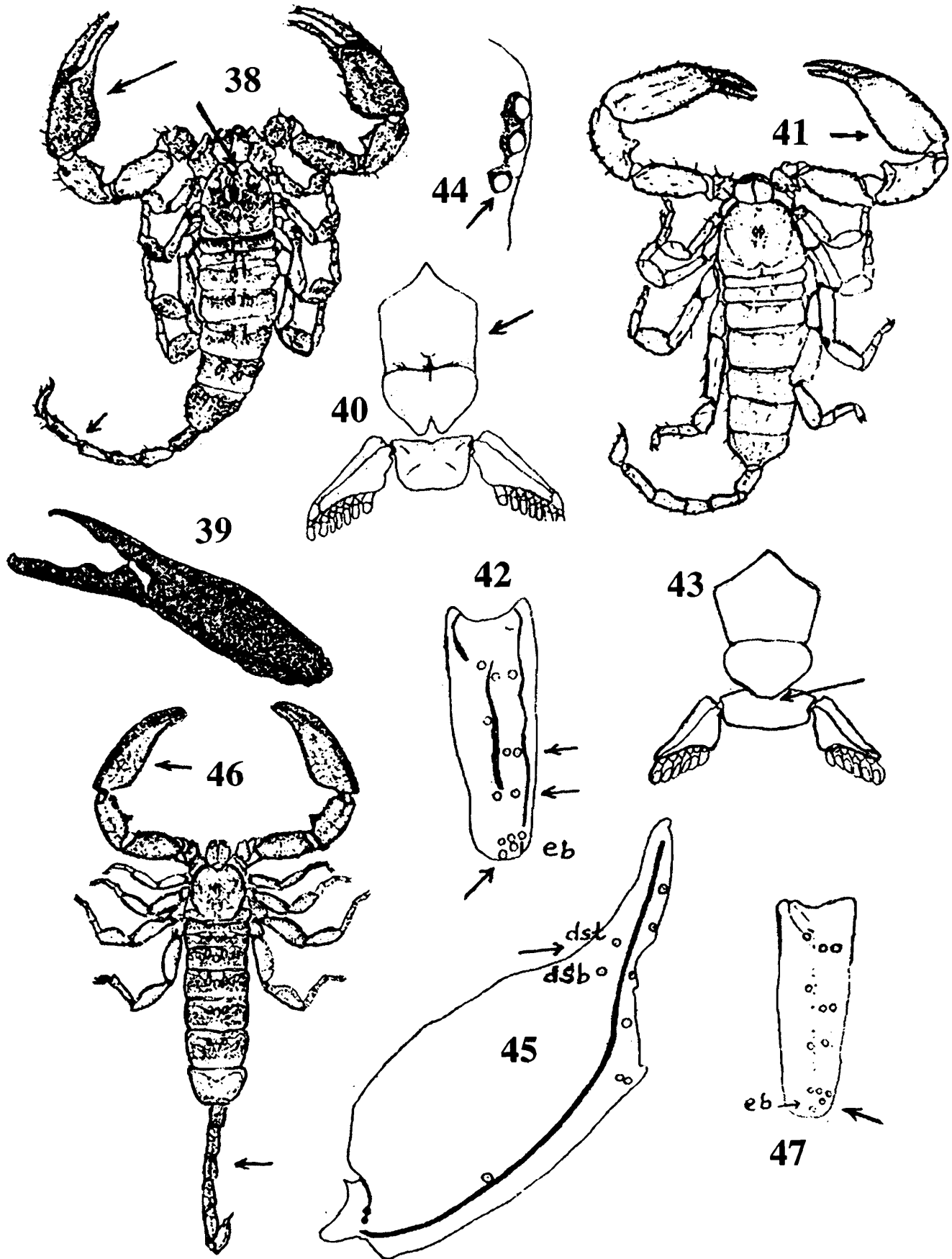
Figs. 1-14. Distal portion of tarsomere I. 1. with a pair of pedal spurs (family Buthidae); 2. with single pedal spur (families Ischnuridae and Scorpionidae). 3-4. Manus and immovable finger of pedipalp with 'A' type trichobothrial pattern (family Buthidae) 3. dorsal view; 4. ventral view. 5-6. Manus and hand of pedipalp : 5. flat, in Ischnuridae 6. not flat in Scorpionidae. 7-8. Manus and immovable finger of pedipalp with 'C' type trichobothrial pattern (families Ischnuridae and Scorpionidae) 7. dorsal view; 8. ventral view. 9-10. Lateral view of tarsomere II of leg : 9. family Ischnuride, 10. family Scorpionidae. 11-12. Ventral view of chelicera : 11. with two teeth on immovable finger, 12. with single tooth on immovable finger. 13. Carapace of *Lychas* dorsal view 14. *Lychas (Alterotrichus) hendersoni* : Telson and anal rim of mteasomal segment V lateral view



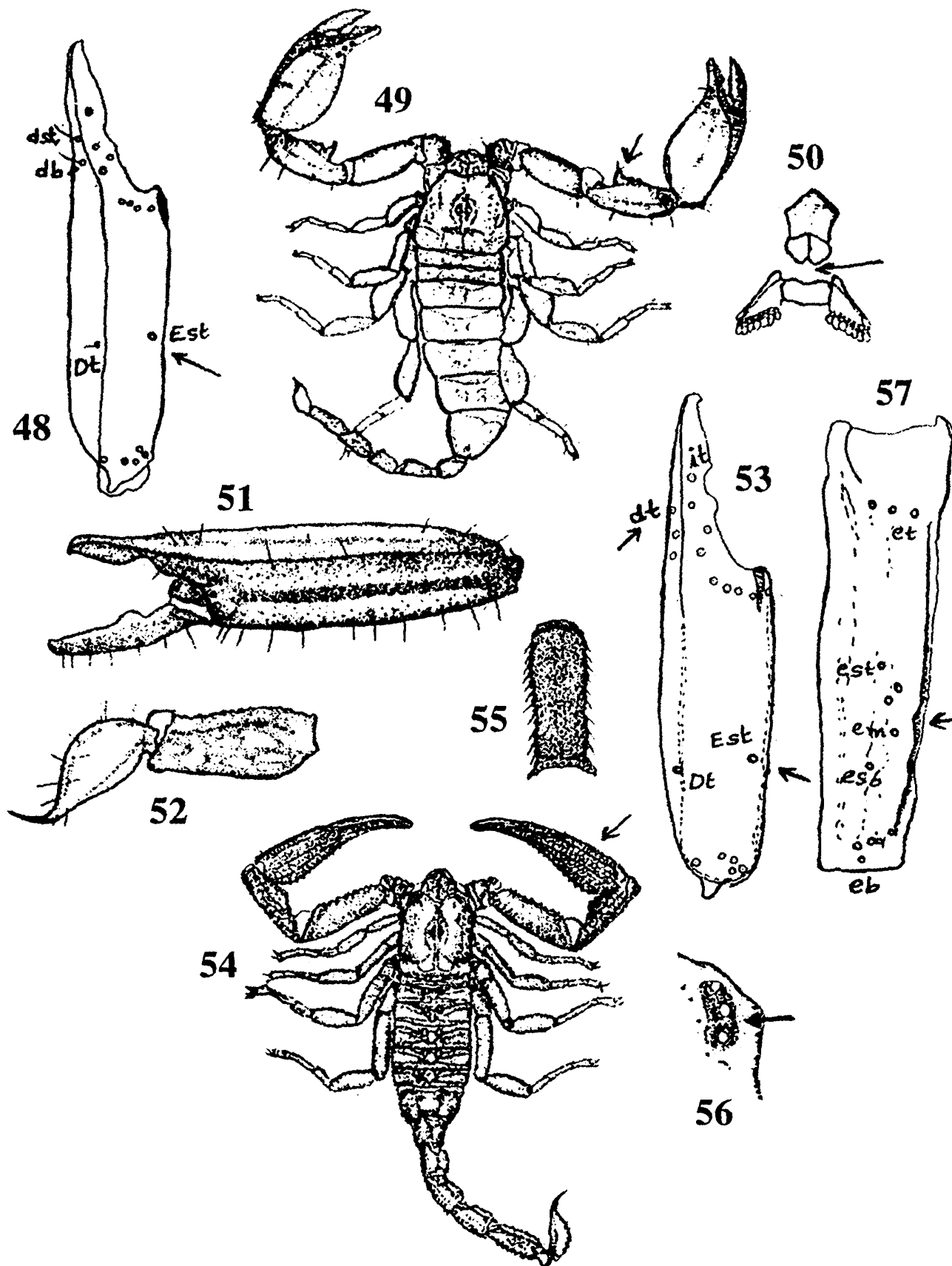
Figs. 15-25. *Lychas (Alterotrichus) hendersoni* female : 15. dorsal view; 16. movable finger of pedipalp dorsal view; 17. pectines, genital operculum and cephalothoracic sternum ventral view, 18. manus and immovable finger of pedipalp dorso-exterior view. showing trichobothria 19-22. *Lychas (Endotrichus) tricarinatus* female; 19. tergite dorsal view; 20. femur of pedipalp dorsal, interior and exterior views showing trichobothria; 21. pectines, genital operculum and sternum ventral view. 23-25. *Lychas (Endotrichus) albimanus* female : 23. manus and immovable finger of pedipalp dorsal view showing trichobothria; 24. pedipalp dorsal view; 25. pectines, genital operculum and sternum ventral view.



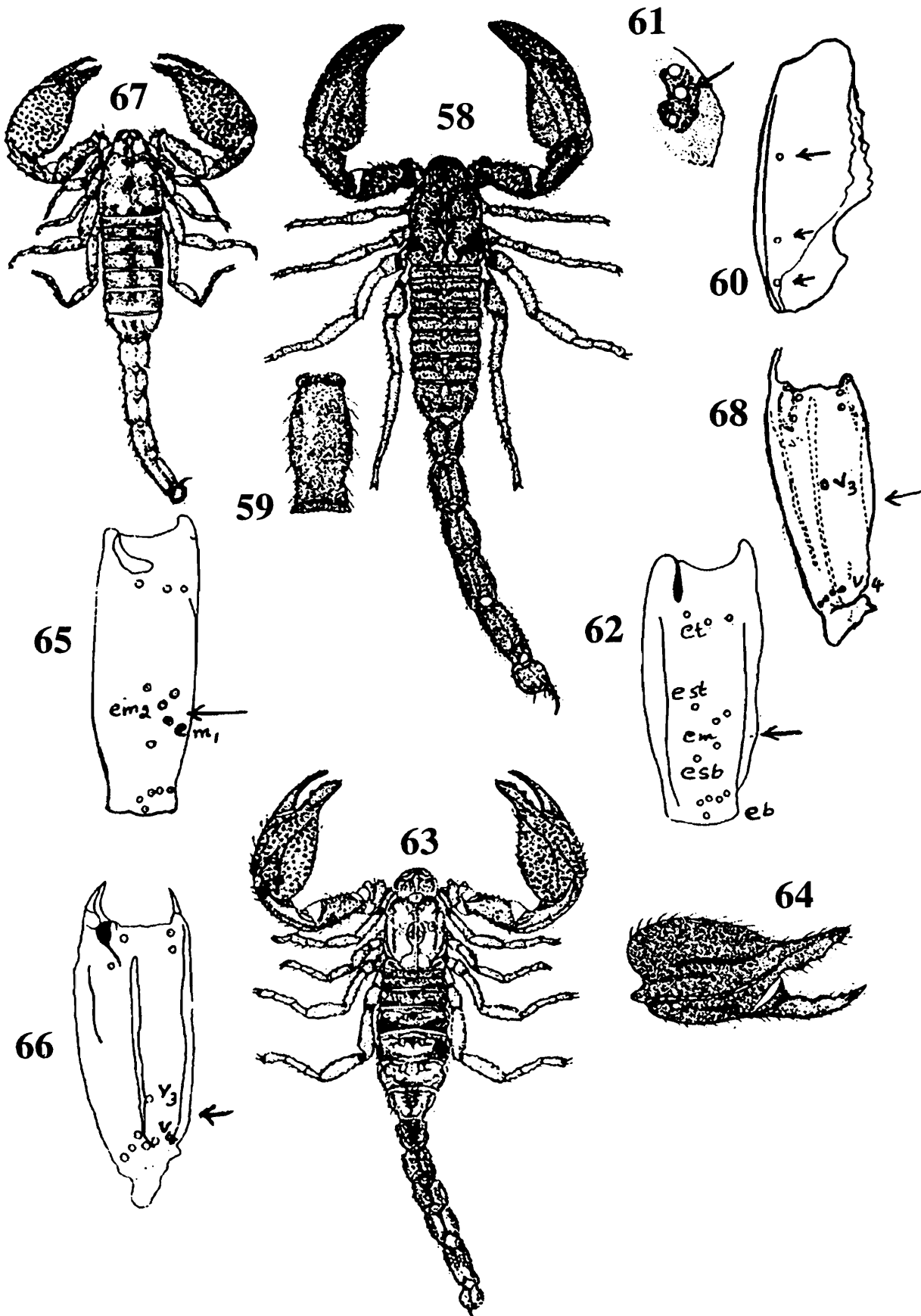
Figs. 26-37. *Charmus indicus* male : 26. dorsal view; 27. movable finger of pedipalp dorsal view; 28. tergite dorsal view; 29. telson and metasomal segment V lateral view; 30. femur of pedipalp dorsal, interior and exterior views showing trichobothria; 31. pectines, genital operculum and sternum, ventral view. 32-34. *Isometrus (Reddyanus) brachycentrus* female : 32. telson and anal rim of metasomal segment V lateral view; 33. manus and fingers of pedipalp exterior view; 34. manus and fingers of pedipalp exterior view showing trichobothria. 35-37. *Isometrus (Closotrichus) sankeriensis* female; 35. manus and fingers of pedipalp exterior view showing trichobothria; 36. body dorsal view; 37. femur of pedipalp dorsal, interior and exterior views showing trichobothria.



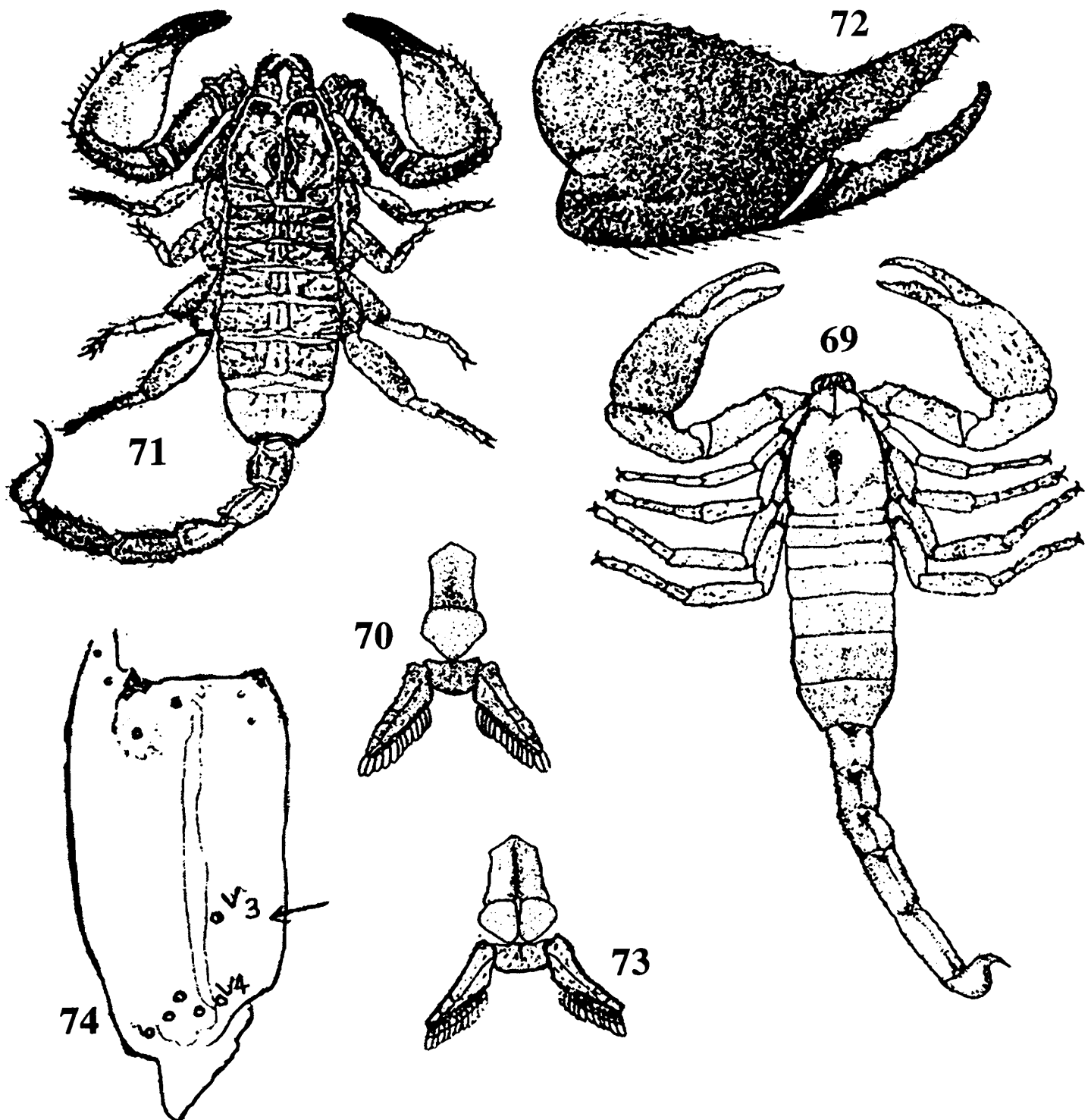
Figs. 38-47. *Chiromachetes fergusonii* female : 38. dorsal view; 39. manus and fingers exterior view; 40. pectines, genital operculum and sternum ventral view. 41-45. *Liocheles laeviceps laeviceps* female : 41. dorsal view; 42. patella of pedipalp exterior view showing trichobothria; 43. pectines, genital operculum and sternum ventral view; 44. lateral eyes lateral view; 45. manus and immovable finger of pedipalp dorsal view showing trichobothria. 46-47. *Liocheles laeviceps malabarensis* female : 46. dorsal view; 47. patella of pedipalp exterior view showing trichobothria.



Figs. 48-57. *Liocheles laeviceps malabarensis* female, manus and immovable finger of pedipalp exterior view. 49-53. *Hormurus australasiae* male : 49. dorsal view; 50. pectines, genital operculum and sternum ventral view; 51. manus and fingers exterior view; 52. telson and metasomal segment V lateral view; 53. manus and immovable finger of pedipalp exterior view showing trichobothria. 54-57. *Heterometrus (Heterometrus) keralaensis* male : 54. dorsal view; 55. metasomal segment V ventral view; 56. lateral eyes lateral view; 57. patella of pedipalp exterior view showing trichobothria.



Figs. 58-68. *Heterometrus (Heterometrus) malapuramensis* male : 58. dorsal view; 59. metasomal segment V ventral view; 60. patella of pedipalp ventral view showing trichobothria; 61. lateral eyes lateral view; 62. patella of pedipalp exterior view showing trichobothria. 63-66. *Heterometrus (Srilankametrus) gravimanus* male : 63. dorsal view; 64. manus and fingers exterior view; 65. patella of pedipalp exterior view showing trichobothria; 66. manus of pedipalp ventral view showing trichobothria. 67-68. *Heterometrus (Chersonesometrus) granulomanus* male : 67. dorsal view; 68. manus of pedipalp ventral view showing trichobothria.



Figs. 69-74. *Heterometrus (Chersonesometrus) scaber* female; 69. dorsal view; 70. pectines, genital operculum and sternum ventral view. 71-74. *Heterometrus (Chersonesometrus) kanaraensis* male : 71. dorsal view; 72. manus and fingers exterior view; 73. pectines, genital operculum and sternum ventral view; 74. manus of pedipalp ventral view showing trichobothria.

INTERESTING SPECIES RECORDS OF SCORPIONS FROM KERALA

Family ISCHNURIDAE

1. *Chiromachetes fergusonii* Pocock

1899. *Chiromachetes fergusonii* Pocock. *J. Bombay nat. Hist. Sioc.* **12** : 744.

Material examined : 1 Female, 5 young ones, Kerala : Quilon district : Thenmala range forest, Kazhuthurutti, 9.viii.1997. Coll. P. M. Sureshan (Reg. No. 10439).

Distribution : India : Kerala : Trivandrum (Type locality), Quilon.

Remarks : The species is endemic to Kerala and reported from the state from a place very near to the type locality after the original description in 1899.

Family SCORPIONIDAE

2. *Heterometrus (Chersonesometrus) kanaraensis* (Pocock)

1900. *Palamnaeus scaber kanaraensis* Pocock, *Fauna Brit. India Arachn.* 93.

1981. *Heterometrus (Chersonesometrus) phipsoni kanaraensis*. *Couzijn. Zool. Verln.* **184** : 151.

Material examined : Kerala : Parambikulam Wildlife Sanctuary : 1 male, Parambikulam, 24.iii.1997, 1 male, Pezhakunnu, 27.iii.1997. Coll. K. C. Gopi (Reg. No. 10664 & 10075); 5 young ones, Kamathalachi, 30.x.1995, 1 female, 1 male, Anchupoolai, 3.ii.1995, 1 female, 1 male, Pulikkal, 1.xi.1995, 3 young ones, Sirkarpathi, 29.x.1995, 1 female, Venkoli, 27.x.1995, Coll. P. M. Sureshan (Reg. Nos. 8450, 8451, 8454, 8456, 8457).

Distribution : India : Karnataka : Kanara (Type locality); Maharashtra : Bombay; Kerala.

Remarks : Though the species is reported for the first time from Kerala it seems commonly distributed in the forested tracts of southern Western Ghats since represented by good numbers in the present collection.

SYSTEMATIC LIST

Family BUTHIDAE

Subfamily BUTHINAE

1. *Lychas (Alterotrichus) hendersonii* Pocock

1897. *Lychas hendersonii* Pocock. *J. Bombay nat. Hist. Soc.*, **11** : 111.

2. *Lychas (Endotrichus) tricarinatus* Simon

1884. *Lychas tricarinatus* Simon. *Ann. Mus. civ. sto. nat. Genova* **20** : 371.

3. *Lychas (Endotrichus) albimanus* Henderson
1919. *Lychas albimanus* Henderson. *Rec. Indian Mus.* 16(5) : 379-381.

4. *Charmus indicus* Hirst.
1915. *Charmus indicus* Hirst. *Ann. Mag. nat. Hist.*, 15(8) : 224-225.

Subfamily CENTRURINAE

5. *Isometrus (Reddyanus) brachycentrus* Pocock
1899. *Isometrus brachycentrus* Pocock. *J. Bombay nat. Hist. Soc.* 12 : 263.
6. *Isometrus (Closotrichus) sankeriensis* Tikader & Bastawade
1983. *Isometrus (Closotrichus) sankeriensis* Tikader & Bastawade. *Fauna India. Scorpions.* III. 311.

Family ISCHNURIDAE

7. *Liocheles laeviceps laeviceps* (Pocock)
1890. *Iomachus laeviceps* Pocock. *Ann. Mag. nat. Hist.*, 5(6) : 242.
8. *Liocheles laeviceps malabarensis* (Pocock)
1900. *Iomachus laeviceps malabarensis* Pocock. *Fauna Brit. India. Arachn.* : 82.
9. *Hormurus australasiae* (Fabr.)
1775. *Scorpio australasiae* Fabr., *Syst. Ent.*, : 399.
1990. *Hormurus australasiae* : Pocock, *Fauna Brit. India, Arachn.*, : 79.
10. *Chiromachetes fergusonii* Pocock
1899. *Chiromachetes fergusonii* Pocock. *J. Bombay nat. Hist. Soc.* 12 : 744.

Family SCORPIONIDAE

Subfamily SCORPIONINAE

11. *Heterometrus (Heterometrus) keralaensis* Tikader and Bastawade
1983. *Heterometrus (Heterometrus) keralaensis* Tikader and Bastawade. *Fauna of India. Scorpions.* III. 528.
12. *Heterometrus (Heterometrus) malapuramensis* Tikader and Bastawade
1983. *Heterometrus (Heterometrus) malapuramensis* Tikader and Bastawade. *Fauna of India. Scorpions.* III. 533.

13. *Heterometrus (Srilankametrus) gravimanus* (Pocock).
 1894. *Scorpio gravimanus* Pocock. *Ann. Mag. nat. Hist.* **13**(6) : 75
 1900. *Palamnaeus gravimanus* Pocock. *Fauna Brit. India. Arachn.* 90.
 1981. *Heterometrus (Srilankametrus) indus indus* Couzijn. *Zool. Verln.* **184** : 121.
14. *Heterometrus (Chersonesometrus) granulomanus* Couzijn
 1981. *Heterometrus (Chersonesometrus) granulomanus* (Couzijn). *Zool. Verln.* **184** : 142.
15. *Heterometrus (Chersonesometrus) scaber* (Thorell)
 1877. *Pandinus scaber* Thorell. *Atti. Soc. Ital.* **19** : 202.
 1981. *Heterometrus (Chersonesometrus) scaber scaber* Couzijn. *Zool. Verln.* **184** : 144.
16. *Heterometrus (Chersonesometrus) kanaraensis* (Pocock)
 1900. *Palamnaeus scaber kanaraensis* Pocock. *Fauna Brit. India. Arachn.* : 93.
 1981. *Heterometrus (Chersonesometrus) phipsoni kanaraensis* Couzijn. *Zool. Verln.* 184 : 151.

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