XVI. THE DISTRIBUTION OF THE ORIENTAL SCOLOPENDRIDÆ

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WITH A LIST OF THE SPECIMENS IN THE COLLEC-TION OF THE INDIAN MUSEUM, COMPILED FROM DATA SUPPLIED BY DR. KARL KRAEPELIN.

The Scolopendridæ in the Indian Museum have recently been identified by Dr. K. Kraepelin who, however, published no report upon them as they all belonged to well-known species. At the suggestion of Dr. Annandale, therefore, I have prepared a list, drawn up in the order adopted by Dr. Kraepelin in his "Revision der Scolopendriden" (Mitt. Naturhist. Mus. Hamburg, xx, 1902, pp. 1—276), with the object of recording their distribution. The page-number given after each genus and species is a reference to the place of its description in this "Revision." The number given in brackets after each locality refers to the number of specimens in the collection. The names of localities enclosed in square brackets are those of places not in the Oriental Region. When that of a genus or species is similarly enclosed no specimen of it is recorded in Dr. Kraepelin's "Revision" from this Region.

List of the Scolopendridæ in the Collection of the Indian Museum.

Genus Cryptops, Leach; p. 32.

I. C. sp. (doubtful).
W. Himalayas: Bhim Tal, 4,500 ft., Kumaon (1).

Genus Otostigmus, Fbr.; p. 97.

O. politus, Karsch; p. 109.
 W. Himalayas¹: Matiana, c. 8,000 ft., Simla hills (1).
 E. Himalayas¹: Sureil, 5,000 ft., Darjiling district (1).
 Assam: Dikrang valley.

¹ The western frontier of Nepal has been taken as the division between E. and W. Himalayas. All records from Nepal, Naini Tal, Almora, etc., have been regarded as Himalayan unless definitely known to belong to the Terai.

3. O. insularis, Haase; p. 112.

E. Himalayas: Ghumti, 1,800 ft., Darjiling district (1).

[Found since the collection was returned by Dr. Kraepelin.

I am responsible for this identification.]

4. O. rugulosus, Por.; p. 115.

Little Andaman (9).

Lower Burma: Tavoy (5); Mergui Archipelago (3).

By an oversight the Mergui specimens were not sent to Dr. Kraepelin. They were originally described by Mr. Pocock in the "Mergui Expedition Results," vol. i, pt. 1, 1889 (reprinted from Journ. Linn. Soc., Zool., xxi), as O. carinatus var. insulare, Haase. Kraepelin raises this variety to specific rank: and he also gives as one of the synonyms of O. rugulosus, Por., the O. carinatus of Pocock's "Myriopoda of Burma" (Ann. Mus. Civ. Genova, xxx, p. 112). A comparison of the Mergui specimens with the O. rugulosus identified for us by Dr. Kraepelin reveals no specific difference between the two, whereas the finely grooved polished terga of all these specimens are in striking contrast to the strongly ridged granular terga of our specimen of O. insularis. The confusion appears to have arisen from the difficulty, often experienced in examining centipedes, of distinguishing fine grooves on the terga from ridges.]

5. O. spp. (doubtful).

W Himalayas: Murree, Punjab; Theog, Simla hills.

Bombay Presidency: W. Ghats.

Assam: Dikrang valley.

Burma: Upper-Kakhyen hills; Irrawady, 2nd defile.

Lower-Pegu; Tavoy; Upper Tenasserim.

Malay Peninsula: Penang.

Genus Rhysida, Wood; p. 139.

6. R. immarginata (Por.); p. 143.

W Himalayas: Naini Tal (1).

E. Himalayas: Nepal—Chitlong, Little Nepal Valley (23);
Pharping (1); Gowchar (1).

Darjiling district—Darjiling (3); Sureil, 5,000

ft. (1); Punkabari (1).

Central Provinces: Nowgong (2).

Bengal: Calcutta (3); Narail, Jessore (2); Ranigunge (5);

Tinpahar (3); Sahibgunge (12).

Assam: Samagooting (12); Dilkoosh, Cachar (1).

Burma: Lower—Rangoon (1); Moulmein (2).

Upper—Pudupyu (3).

Malay Peninsula: Penang (3).

Andamans: Port Blair (1); "Andamans" (6).

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7. R. nuda (Newp.); p. 144.
  Lower Burma: Pegu (2).
8. R. longipes (Newp.); p. 148.
  United Provinces: Lucknow (2); Chandan-Chowki (1).
  Nepal Terai: Dekkat-Bhuli (2).
  Bengal: Calcutta (4+a number of young); Ranigunge (2).
  Ceylon: Paradise (1).1
  Lower Burma: Moulmein (3).
  Malay Peninsula: Penang (1); Johore (1).
  Andamans (3).
  [Mauritius (2).]
9. R. spp. (doubtful).
  E. Himalayas: Kurseong, 5,000 ft., Darjiling district.
      Found since the collection was returned by Dr. Kraepelin.
         I am responsible for this identification.]
  United Provinces: Bijnor; Kichha
  Bombay Presidency: Poona.
  Travancore: Maddathorai, at the western base of the W
                 Ghats.
  Andamans.
            Genus Ethmostigmus, Poc.; p. 155.
10. E. pygomegas (Kohlr.); p. 158.
  E. Himalayas: Darjiling district—Darjiling (3).
                 Dafla Hills—Harmutti (4); "Daflas" (3);
                   Burroi, at base of hills (2).
  Assam: Garo hills (1); Dikrang valley (7); Silcuri, Cachar
  (2); "Cachar" (3); Sibsagar (3).
Burma: Lower—Pegu (1); Pagae, Tavoy (1).
           Upper—Nampong, Kakhyen hills (2).
  Narcondam Island (1).
  Nicobars (1).
    E. rubripes (Brdt.); p. 161.
 [Torres Straits: Murray Island (1); N. S. Wales (2).]
12. E. platycephalus (Newp.); p. 162.
 Lower Burma: Upper Tenasserim (1); hills dividing Burma
                   and Siam (1).
13. E. spinosus (Newp.); p. 163.
  Madras Presidency: South Arcot (4).
14. E. spp. (doubtful).
  Madras Presidency: Chevroy hills.
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[Galilee : Mt. Tabor.]

¹ There is a Paradise estate in the Kurunegala district of the N. E. Province; but it is conceivable that the label is an incorrect copy of some contraction of Peradeniya, where the specimen may have been collected by someone working at the laboratories of the Royal Botanic Gardens.

Genus Cormocephalus, Newp.; p. 184.

15. C. dentipes, Poc.; p. 191.

Bengal: Calcutta (1); Paresnath, 4,000—4,500 ft., Chota Nagpur (1).

16. C. pygmæus, Poc.; p. 192.

E. Himalayas: Punkabari, Darjiling district (1).

Bengal: Calcutta (2); Chakardharpur, Chota Nagpur (3).

Assam: Silcuri, Cachar (1).

Lower Burma: Tavoy (1).

[17. C. rubriceps (Newp.); p. 198.

New Zealand (1).]

[18. C. westwoodi, Newp.; p. 200.

N. S. Wales (1).]

[Genus Trachycormocephalus, Kraepelin; p. 218.

19. T mirabilis, Poc.; p. 219.

E. Arabia (1).]

Genus Scolopendra (L.), Newp.; p. 223.

20. S. valida, Luc.; p. 234.

Punjab: Rawal Pindi (1).

Sind: Karachi (2).

Rajputana: Ajmere (2).

Malay Peninsula: Johore (4).

[Persia: Bushire (1).]

[21. S. canidens, Newp.; p. 248.

Galilee: Mt. Tabor (6).]

22. S. morsitans, L.; p. 250.

W. Kashmir: Chitral (4); Malakand (1).

W. Terai: Naini Tal district—Joulasal (1); Rausalı (1); Bhura (1).

Almora district—Dugari (3); Melaghat (3).

E. Himalayas: Punkabari (5).

Sind: Cutch (30).

Punjab: Delhi (68); Dera-Ghazi-Khan (3).

Rajputana: Ajmere (3); Jeypore (1).

United Provinces: Hurdwar (48); Bhanwar (1); Buzru-Kurme, Basti district (1); Allahabad (2; recently received; my identification).

Bombay Presidency: Poona (2); Mahableshwar (2).

Central Provinces: Chanda (1); Sambalpur (2); Nowgong (1).

Bengal: Calcutta (9); Ranigunge (8); Tinpahar (1); Singbhum (1); Gmatia, Birbhum (1); Rajshahi (1); Berhampore (4); Bettiah, Champaran (1); Chakardharpur, Chota Nagpur (2).

E. Bengal and Assam: Rajshahi (1); Samagooting (2); Dil-

koosh, N. E. Cachar (8); Sibsagar (1).

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Madras Presidency: Anantigiri, Vizagapatam (7); Waltair
               (6); Ganjam (2); Ramnad (4); Coimbatore (1);
               Gopkuda Island, Chilka Lake (1).
  Burma: Lower—Rangoon (1); Moulmein (3); Pegu (2);
                        Tavoy (1); Upper Tenasserim (2).
             Upper—Mandalay (2); Pudupyu (1).
  Malay Peninsula: Johore (2); Penang (7); Perak (2).
Andamans: Port Blair (1); "Andamans" (4).
  [Baluchistan: "N. Baluchistan" (10).
  Afghanistan (4).
  Persia: Bushire (1).
  Mauritius (1).]
23. S. cingulata, Latr.; p. 254.
  Malay Peninsula: Johore (1).
  Andamans (1).
  [Galilee: Mt. Tabor (2).]
24. S. subspinipes, Leach; p. 256.
  Madras Presidency: Cochin (1).
  Ceylon: "Paradise" (1).
  Lower Burma: Rangoon (1).
  Malay Peninsula: Johore (2).
  Singapore (1).
  Sumatra: Sinkip Island (1).
  Java (1).
  Hongkong (1): with right anal leg as in var. dehaani.
25. S. subspinipes var. dehaani, Brdt.; p. 260.
  W. Himalayas: Naini Tal (1).
  E. Himalayas: Punkabari, Darjiling district (3).
  Madras Presidency: Ootacamund, Nilgiris (3); Upper Goda-
              very (1).
  Bengal: Calcutta (11); Chinsura (1); Barrackpore (2); Seram-
              pore (1); Barrakur (2); "Bengal" (2).
  E. Bengal and Assam: Dacca (1); Silcuri, Cachar (2); Dilkoosh,
              Cachar (3); Jettinga River, N. Cachar hills (5);
              "Cachar" (1).
 Burma: Lower—Moulmein (1); Prome (1); Amherst (3);
Upper Tenasserim (12); Ye-bu, Tenasserim (1);
Dawna hills (1); Hills dividing Burma and Siam
              (2); Pegu (3); Kyuk Phyu (1); "Tavoy" (12);
             Samuading, Tavoy (1); Egaya, Tavoy (1); Mintao, Tavoy (1); Pagae, Tavoy (3); Cheduba Island (3);
              Mergui Archipelago (8).
           Upper—Tsagain (1).
 Malay Peninsula: Penang (9); Johore (9).
 Sumatra: Deli (1).
  Java (1).
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Andamans: Port Blair (20); "Andamans" (38); Little Andaman (4).

Nicobars (20).

26. S. subspinipes var. hardwickei, Newp.; p. 262. Madras Presidency: S. Arcot (1).

Distribution of Oriental Scolopendridæ.

Selecting the records from the Oriental region notified by Dr. Kraepelin in his "Revision" and incorporating with these those of the above list and in a few other papers referred to separately, we have the following distribution recorded for Oriental species:—

Genus CRYPTOPS, Leach.

C. feæ, Poc.—Burma (Palon).

C. modigliani, Silo—Sumatra.

C. inermipes, Poc.—Christmas Island; ? Burma.

C. doriæ, Poc. (= C. loriæ, Silv.¹)—Burma (Palon, Shwegoo, Carin Berge, etc.); Sumatra?; Java; New Guinea.

C. spp. (doubtful)—India (W Himalayas, Madras Presidency 6,000 ft. alt.2).

Genus PARACRYPTOPS, Poc.

P. weberi, Poc.—Flores; Java.

Genus Mimors, Kraep.

M orientalis, Kraep.—China (Prov. Schensi).

Genus OTOCRYPTOPS, Haase.

O. rubiginosus (L. Koch)—China; Japan; N. America (Minnesota, Indiana).

O. melanostomus (Newp.)—From the Philippines over Java, Celebes, Halmaheira, etc., to New Guinea; from Central America (Porto Rico, St. Vincent in the W Indies) through Venezuela and Brazil to Argentina (Rosario).

var. celebensis, Haase—Celebes.

Genus Scolocryptops, Newp.

S. broelemanni, Kraep.—China (Chou-San).

See C. Attems, "Javanische Myriopoden," Mitt. Naturhist. Mus. Hamb.,
 xxiv, 1906 (1907).
 See Kraepelin, Bull. Mus. Hist. Nat. Paris, x, 1904, p. 244.

Genus Otostigmus, Por.

- O. aculeatus, Haase—Java; Tonkin.
- O. nudus, Poc.—India (Madras Presidency).
- O. politus, Karsch-India (W. Himalayas, E. Himalayas, Assam); Burma; Sumatra; China (Tientsin, Tsingtau, Peking); New Guinea; Australia.1
- O. geophilinus, Haase-Java; Timor.
- O. ceylonicus, Haase—Ceylon; Burma.
- O. scaber, Por.—Burma¹; Malay Peninsula²; Siam; Nicobars; Cochin China¹; China.
 O. insularis, Haase—India (E. Himalayas—Bhutan¹ and
- Darjiling district); Ceylon; Philippines; Seychelles.
- O. longicornis (Töm.)—Borneo.
- O. asper, Haase—Philippines; Marianne Islands.1
- O. sumatranus, Haase—Sumatra.
- O. punctiventer (Töm.)—Sumatra 1; Borneo; Philippines. 1 O. astenus (Kohlr.)—Philippines; Marianne Isles; Caroline Isles; Samoa; Solomon Isles; New Caledonia 1; New Guinea: Australia: Seychelles.
- O. rugulosus, Por.—Burma (Tavoy); Siam; Andamans; Seychelles 1; Mauritius.
- O. oweni, Poc.—Burma (Mergui Archipelago).
- O. spinosus, Por.—Burma (Tenasserim); Java; Borneo; Algeria.
- O. feæ, Poc.—Burma.
- O. splendens, Poc.—India (Madras Presidency).
- O. sucki, Kraep.—Borneo.
- O. niasensis, Silv.—Sumatra (Nias Island).
- O. morsitans, Poc.—India; Burma; Ceylon.
- O. rufriceps, Poc.—India (Madras Presidency).
- O. nemorensis, Silv.—Sumatra; Java.
- O. orientalis, Por.—India (Bombay Presidency, Madras Presidency 6,000 ft. alt.1); Seychelles.
- O. metallicus, Haase—Ceylon; Sumatra 1; Sangir Island.
- O. multidens, Haase—Sumatra; Java; Borneo 1; Celebes; Mentaway Island.

Genus Rhysida, Wood.

- R. immarginata (Por.)—India (W. and E. Himalayas, Central Provinces, Bengal, Assam, Madras Presidency 6,000 ft. alt.1); Ceylon8; Burma; Malay Peninsula; Sumatra4; Borneo 4; Andamans; Philippines.
- R. nuda (Newp.)—Ceylon; Burma; Siam 4; Banda; Australia; Paraguay.1

¹ See Kraepelin, Bull. Mus. Hist. Nat. Paris, x, 1904.

See Flower, Journ. Straits Asiatic Soc., No. 36, July, 1901.
 See Pocock, Journ. Bomb. Nat. Hist. Soc., vii, 1892-93, p. 139.
 See C. Attems, "Javanische Myriopoden," Mitt. Naturhist. Mus. Hamb., xxiv, 1906 (1907).

- R. carinulata, Haase—Malay Peninsula¹; Sumatra; Celebes; New Guinea; Thursday Island; Australia.
- R. calcarata, Poc.—Siam²; Cambodia.
- R. monticola, Poc.—Borneo.
- R. longipes (Newp.)—Entire tropical zone of Australia, through Malaysia, Burma, India (United Provinces, Nepal Terai, Bengal) and Ceylon to E. and W. Africa (also Madagascar and Mauritius); Mexico; Central and South
- R. paucidens, Poc.—India (Madras Presidency); Somaliland.
- R. lithoboides (Newp.)—India (Madras Presidency²); China.
- R. crassispina, Kraep.—India (Bombay Presidency, Madras Presidency 2).
- R. petersi (Por.)—India (Bhutan²); Cape Colony.
- R. cuprea, Kraep.—India (Bhutan).

Genus Ethmostigmus, Poc.

- E. pygomegas (Kohlr.)—N. India (throughout E. Himalayas and Assam); Burma; Narcondam Island; Nicobars.
- E. albidus (Töm.)—Singapore.
- E. bisulcatus (Töm.)—Siam; Java; Borneo.
 E. rubripes (Brdt.)—China; Java; New Guinea; Solomon Isles²; Thursday Island; Australia (Queensland, Sidney, etc.); Tasmania.2
- E. platycephalus (Newp.)—India (Madras Presidency); Burma;
- Java; Molucca; New Guinea; New Britain. E. spinosus (Newp.)—India (Madras Presidency); Ceylon; Burma (Thagata, Carin Berge).

Genus Anodontostoma, Töm.

A. octosulcatus, Töm.—S. E. Borneo (Matang, Bendjermasin).

Genus Asanda, Mein.

A. brevicornis, Mein.—India (W. Himalayas, Madras Presidency²); Andamans; Socotra; Somaliland²; Arabia.²

Genus Cormocephalus, Newp.

- C. dentipes, Poc.—India (Bengal).
- C. philippinensis, Kraep.—Philippines.
- C. pygmæus, Poc.—India (E. Himalayas, Bombay Presidency, Bengal, Assam, Madras Presidency); Burma.

l See Flower, Journ Straits Assatic Soc., No. 36, July, 1901; R. casinulata, Haase, includes R. rugulosa, Poc., according to Kraepelin.

² See Kraepelin, Bull. Mus. Hist. Nat. Paris, x, 1904.

C. dispar, Por., var. sarasinorum, Haase—Ceylon (Newara Eliya).

[C. dispar, Por., from S. Africa (Transvaal, Kafferaria); Madagascar.]

C. inermipes, Poc.—Ceylon.

Genus PSILOSCOLOPENDRA, Kraep.

P. /eæ (Poc.)—Burma (Carin Berge).

Genus Scolopendra (L.), Newp.

- S. valida, Luc.—India (Punjab, Sind, Rajputana); Malay Peninsula; Canary Isles; Syria; Arabia; Djibuti; Socotra; E. coast of the Persian Gulf. [var. simonyi, Att., Abd el Kuri Island off C. Guar-dafui.]
- S. pinguis, Poc.—Burma (Carin Berge).

S. gracillima, Att.—Java.

- S. morsitans, L.—Occurs in all lands of the tropical and temperate zones; centred in the Oriental and African regions.
- S cingulata, Latr.—Malay Peninsula; Andamans; S. Europe; Asia Minor; Syria; N. Africa and in E. Africa as far south as Tanga in German E. Africa (introduced?); Madagascar¹; Brazil.¹
- S. subspinipes, Leach—Occurs in all lands of the tropical and temperate zones with the exception of those round the Mediterranean Sea where it is replaced by the allied S. cingulata; centre of distribution the Oriental region, where a series of varieties have been evolved.
 - var. dehaani, Brdt.—Chiefly from Sumatra, Java, Malay Peninsula, the whole of Further India (Burma. Siam, Anam) to China and India.
 - var. hardwickei, Newp.—India (Madras Presidency); Ceylon; Further India; Nicobars; Malay Archipelago.

var. spinosissima, Kraep.—Philippines.

var. mutilans, I. Koch—China; Japan.

var. multidens, Newp.—Sumatra¹; Java?; Tonkin¹; China; Japan.

[var. japonica, L. Koch, Japan.]

S. indica, Mien.—India (W. Himalayas, Punjab, etc.).

The region regarded as "Oriental" in drawing up the above list extends from the western boundaries of Sind, the Punjab and Kashmir to the eastern shores of Java, Borneo and the Philippines; and all the Chinese species have been included.

The centre of distribution of the Oriental Scolopendridæ seems undoubtedly to be the Malay Archipelago, 33 (excluding the

¹ See Kraepelin, Bull. Mus. Hist. Nat. Paris, x, 1904.

species from Singapore which is here regarded as belonging to the Malay Peninsula) out of the known 66 specifically identified forms occurring in these islands. Of these 33 species 14 are known from no other locality, nine of them—Cryptops modigliani, Otostigmus longicornis, O. sumatranus, O. sucki, O. niasensis, O. nemorensis, Rhysida monticola, Anodontostoma octosulcatum, and Scolopendra gracillima—being confined to the Sumatra-Java-Borneo group of islands, one-Otostigmus punctiventer-being common to these and to the Philippines, one—Cormocephalus philippinensis—being restricted to the Philippines, and three—Paracryptops weberi, Otostigmus geophilinus and O. multidens—extending beyond the Oriental region to Flores, Timor and Celebes, respectively. Of the remaining 19 species found in the Oriental section of the Malay Archipelago, the distribution of 2 seems to extend eastwards only that of Otostigmus asper from the Philippine to the Marianne Islands; and that of Otocryptops melanostomus from the Philippines and Java to Porto Rico and Argentina, though no records have yet been made between N. Guinea and Venezuela. It is perhaps worth noting here that the only other species of Otocryptops included in the above list of Oriental species, O. rubiginosus, has a parallel distribution further to the north, extending from China through Japan to N. America where, however, it has apparently only been recorded from the states of Minnesota and Indianamore than half way across the Continent. There are 10 species found both east and west of the Malay Archipelago. Scolopendra morsitans occurs throughout the tropical and temperate zones; S. subspinipes shares the same extensive area with the closely allied S. cingulata which replaces it entirely round the Mediterranean Sea; and Rhysida longipes occurs throughout the tropical zone, being found in India as far north as the Nepal Terai but not in the Himalayas. Otostigmus politus is found from China and the Eastern Himalayas to Australia; Cryptops doriæ from Burma to New Guinea; Rhysida nuda from Burma and Ceylon to Australia (also in Paraguay); Rhysida carinulata from the Malay Peninsula to Australia; Ethmostigmus platycephalus from Eastern India (Madras Presidency) and Burma to New Britain; and E. rubripes from China and Java (no intermediate records as yet) to Tasmania and the Solomon Isles. And Otostigmus astenus, which extends from the Philippines to New Caledonia and Australia, has in addition been recorded from the Seychelles. Of the 7 remaining species occurring in the Malay Archipelago one—Rhysida immarginata—occurs throughout India, Burma and Oriental (not eastern) Malaysia; one—Otostigmus insularis—in the Philippines, E. Himalayas, Ceylon and the Seychelles; four-Otostigmus aculeatus, O. spinosus (found also in Algeria!), Ethmostigmus bisulcatus and Cryptops inermipes—have only been found in the Burma-Cambodia region on the mainland (there appears to be some doubt, however, as to the occurrence of Cryptops inermipes there at all) and in the Sumatra-Java-Borneo group of islands of the Archipelago; and the seventh-Otostigmus

metallicus—occurs in Sumatra and Sangir Island and also in Ceylon.

Of the remaining 33 Oriental species 4 are known from the Malay Peninsula, and 13 others from the Burma-Cambodia-Andaman region. Of the 4 Malay species one—Ethmostigmus albidus—is only known from Singapore. Another—Scolopendra cingulata—also occurs in the Andamans but is otherwise unknown from the Oriental region; it occurs, however, on the one side in Brazil, and on the other in Madagascar, E. Africa and the districts bordering the Mediterranean Sea in Africa, Asia and Europe. Scolopendra valida is found in north-west India (excluding the Himalayas), Persia, Syria, Arabia, Socotra and the Canary Islands, and Otostigmus scaber occurs in the Nicobars, Burma, Siam and China. Of the 13 additional species found in Burma, etc., one— Rhysida calcarata—is known from Cambodia and Siam only, and five —Cryptops feæ. Otostigmus oweni, O. feæ, Psiloscolopendra feæ and Scolopendra pinguis—from Burma only. Otostigmus ceylonicus occurs only in Burma and Ceylon, O. morsitans and Ethmostigmus spinosus in these two countries and in India. E. pygomegas extends from the Nicobars and Burma through Assam and the Eastern Himalayas; Cormocephalus pygmæus is probably to be found all over India and in Burma. And there are two species which have a more scattered distribution, Otostigmus rugulosus occurring in Siam, Burma and the Andamans, the Seychelles and Mauritius; and Asanda brevicornis in the Andamans, Madras Presidency of India, Arabia, Socotra and Somaliland—a distribution allied to that of Scolopendra valida described above.

There are 2 species which appear to be peculiar to China—Mimops orientalis and Scolocryptops broelemanni. The distribution of Otocryptops rubiginosus which is confined in the Oriental Region to China has been referred to above. Another 2 species—Cormocephalus dispar var. sarasinorum and C. inermipes—are confined to Ceylon, C. dispar (s. str.) being however only found in Madagascar and S. Africa.

The remaining II species are all Indian. Otostigmus nudus, O. splendens and O. rufriceps are only known from the Madras Presidency; Rhysida crassispina from the Madras and Bombay Presidencies; and Otostigmus orientalis from these two districts and the Seychelles. Cormocephalus dentipes is recorded only from Bengal, Rhysida cuprea from Bhutan and Scolopendra indica from the W. Himalayas, Punjab, etc. Rhysida lithoboides occurs in India and China, R. paucidens in India and Somaliland and R. petersi in India and S. Africa.

It would be futile to attempt to draw any far-reaching conclusions from the above records, for it is almost certain that many species will eventually be found in fresh localities as soon as these can be thoroughly examined. A few noteworthy facts may, however, be briefly noted here.

As stated above, the Oriental Scolopendridæ seem to be centred in the Malay Archipelago. Species found in the "Oriental"

portion of this Archipelago (excluding the three which occur in all longitudes) are found to extend eastwards through Polynesia and Central America to Porto Rico and Argentina; southwards to Tasmania; northwards to China; and westwards practically not beyond the boundary of the Oriental region, though one species occurs in Socotra and one, otherwise not known west of Burma, has been found in Algeria. Thus they appear as a whole to have a much wider distribution over the islands to the east than over the mainland to the west.

Again excluding the three most widely distributed species, we find that only two species are common to the Philippines and to the Sumatra-Java-Borneo group, the former having three additional species and a local variety of *Scolopendra subspinipes*, and the latter twenty-seven additional species. Thus these two groups of islands will probably be found to form separate zoogeographical subdivisions of Oriental Malaysia so far as the Scolopendridæ are concerned.

With regard to the mainland it is almost impossible to draw any satisfactory conclusions on account of the scrappy nature of our information. Several forms appear at present to have a very erratic and scattered distribution. Records of the altitude at which specimens were found are particularly scanty and very badly needed. It is not surprising to find that the habitat of several species occurring in the Archipelago extends into Burma. A few of these range through Assam to India and China, and there seems to be a tendency for such species to extend particularly along the Himalayas. As might well be expected, too. Further India and the Indian Peninsula (India Proper) have each several species which are not found in the other. It may be noted moreover that in the Indian Peninsula Scolopendra subspinipes (s. str.) and its var. hardwickei appear to be confined to the extreme south, var. dehaani being the dominant form in the northern parts.