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# **FRESHWATER CRABS**

**(CRUSTACEA: DECAPODA: BRACHYURA: GECARCINUCIDAE)**

**IN THE COLLECTION OF THE  
WESTERN REGIONAL CENTRE, PUNE**

**S.K. PATI  
R.M. SHARMA**



**ZOOLOGICAL SURVEY OF INDIA**



*Occasional Paper No. 363*

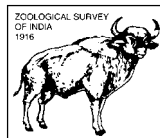
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**Zoological Survey of India  
Kolkata**

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**RECORDS OF THE  
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## INTRODUCTION

Freshwater crabs belong to the infraorder Brachyura of the order Decapoda in the class Malacostraca of the subphylum Crustacea. They are adapted to freshwater, semi-terrestrial and terrestrial mode of life with an ability to complete their life cycle independent of marine environment. They are mainly found in streams, rivers, pools, ponds, swamps, paddy fields, rock holes or pits, tree trunk holes, leaf axils, etc. They are generally active during night time and prefer hidden places for shelter. Freshwater crabs prefer live or dead animals as food. They are the chief source of food for fishes, turtles, birds and mammals. Freshwater crabs also serve as a cheap and important source of protein to human beings particularly tribal and poor people. Some crabs are commercially viable as aquarium or aquaculture species besides having some medical importance (Cumberlidge *et al.*, 2009). Many of the freshwater crabs are excellent indicators of good water quality (Yeo *et al.*, 2008). Freshwater crabs are highly endemic due to their limited dispersal ability, low fecundity and selected habitat preference (Pati & Sharma, 2012a).

Out of 1476 species (1306 exclusively freshwater species) of freshwater crabs (Yeo *et al.*, 2008), India is having about 96 species (91 exclusively freshwater species) (Pati *et al.*, 2012) and few more new species are yet to be described by us besides a recently described species from Odisha state (Pati & Sharma, 2012b). Taxonomical status of some Indian species is uncertain (Bahir & Yeo, 2005, 2007). Due to their ecological and economical importance, a systematic study was conducted on freshwater crabs present in National Zoological Collections (NZC) of Western Regional Centre (WRC), Zoological Survey of India (ZSI), Pune.

## REVIEW OF LITERATURE

Freshwater crabs are well studied for their taxonomy and systematics from various parts of the world (Bott, 1955, 1966, 1969, 1970a; Ng & Takeda, 1992; Ng & Tay, 2001; Cumberlidge & Sternberg, 2002; Bahir & Ng, 2005; Bahir & Yeo, 2005, 2007; Reed & Cumberlidge, 2006; Cumberlidge, 2008a; Ng *et al.*, 2008; Yeo *et al.*, 2008; Cumberlidge & Ng, 2009). Ample literature on systematics of Indian freshwater crabs is also available (Alcock, 1910; Bott, 1970a; Bahir & Yeo, 2007; Pati *et al.*, 2012). However, systematic works pertaining to the group from the presently studied areas (Gujarat, Maharashtra, Karnataka, Goa) are that of Sykes & Westwood (1836), Milne-Edwards (1869), Rathbun (1904, 1905), Alcock (1910), Chopra & Das (1935), Ramakrishna (1951), Chhapgar (1956), Bott (1970a), Patil (2002), Bahir & Yeo (2005, 2007), Srivastava (2005), Patil *et al.* (2007), Ghatak & Ghosh (2008), Pati & Sharma (2011, 2012c, d) and Thigale (2012).

## MATERIAL AND METHODS

The holdings of NZC, WRC, Pune contained about 2800 freshwater crab specimens collected from four states, namely, Gujarat, Maharashtra, Goa and Karnataka over a period of 55 years from 1958 to 2013. All the crab specimens were identified using both morphological and male

gonopod structures following important literature particularly that of Alcock (1910), Bott (1970a) and Bahir & Yeo (2005 & 2007). Identification of species studied was confirmed after comparing available type specimens and other comparative material in the Crustacea Section of Zoological Survey of India, Kolkata. Morphometry of male as well as female crab specimens was done by measuring carapace width, carapace length and carapace height in mm. Methods of measurement and terminology were followed after Ng & Tay (2001) and Bahir & Yeo (2007). Systematics, distribution, IUCN status and photographs of carapace as well as male gonopods are provided for each species.

The following abbreviations are used: A.A.M.: Ashok Amol Matkar; A.P.K.: A.P. Kapur; A.S.M.: A.S. Mahabal; B.E.Y.: B.E. Yadav; B.K.H.: B.K. Haldar; B.K.T.: B.K. Tikader; B.R.G.: B.R. Ghorpade; B.S.L.: B.S. Lamba; C.B.P.: C.B. Prasad; CH: Carapace Height; CL: Carapace Length; Coll.: Collector; CW: Carapace Width; D.B.B.: D.B. Bastawade; D.F.S.: D.F. Singh; dist.: district; E.V.M.: E.V. Mulay; Ex.: Example(s); G.K.P.: G.K. Pawar; G.M.Y.: G.M. Yazdani; G1: Male First Pleopod (Gonopod); G2: Male Second Pleopod (Gonopod); I.M.S.: I.M. Shaikh; IUCN: International Union for Conservation of Nature; K.A.K.: K.A. Kashid; K.A.S.: K.A. Subramanian; K.M.: K. Mathew; K.N.N.: K.N. Nagar; K.R.: K. Reddiah; K.R.R.: K.R. Rao; M.A.M.: M.A. Majud; M.B.R.: M. Babu Rao; M.H.M.: M.H. Mujewar; M.J.J.: M.J. Jadhav; M.M.C.: M.M. Chatterjee; M.R.: M. Rizwana; M.R.P.: M.R. Pardeshi; M.S.P.: M.S. Pradhan; N.C.N.: N.C. Nandi; N.P.: National Park; N.P.I.D.: N.P.I. Das; NZC: National Zoological Collections; P.D.G.: P.D. Gupta; P.D.R.: P.D. Rane; P.P.K.: P.P. Kulkarni; P.R.S.: P.R. Salunke; P.S.B.: P.S. Bhatnagar; R.B.: R. Bano; R.H.K.: R.H. Kamble; R.M.S.: R.M. Sharma; R.N.C.: R.N. Chopra; S.A.A.: S.A. Age; S.D.K.: S.D. Kamble; S.G.P.: S.G. Patil; S.K.P.: S.K. Pati; S.M.A.J.: Shaikh Mujeeb A.J.; S.M.K.: S.M. Ketkar; S.N.C.: S.N. Chaubey; S.R.S.: S.R. Salunke; S.S.J.: S.S. Jadhav; S.S.K.: S.S. Kamble; S.S.T.: S.S. Talmale; S.V.M.: S.V. Mulay; T.P.: Tiger Project; T.R.: Tiger Reserve; W.L.S.: Wildlife Sanctuary; WRC: Western Regional Centre; Y.K.: Yogesh Kad; ZSI: Zoological Survey of India.

## RESULTS AND DISCUSSION

A total of 11 species under 7 genera of family Gecarcinucidae were identified from collections of NZC, WRC, Pune. During the present study, 10 species were encountered in Maharashtra whereas from Gujarat, Goa and Karnataka the species number is found to be 1, 2 and 3, respectively. Distribution of all the species identified is given in Table-1.

*Barytelphusa cunicularis* (Westwood, 1836) and *Barytelphusa guerini* (H. Milne Edwards, 1853) were the most common species in the region studied (Table-1). However, while the former species was not found in the collections from Gujarat, the latter species was absent in the collections from Goa and Karnataka (Table-1). *Oziotelphusa wagrakarowensis* (Rathbun, 1904) is reported for the first time in Maharashtra from many localities in the districts near to Karnataka (Table-1). Rest of the species is having a narrow distribution (Table-1). *Vanni travancorica* (Henderson, 1913) stood as first record to Karnataka (Pati & Sharma, 2011).

Taxonomic uncertainty of all the species of the Indian genus *Barytelphusa* is resolved and only 3 valid species, *B. cunicularis*, *B. guerini* and *Barytelphusa mccanni* (Chopra & Das, 1935) are recognized. From the present study, it was confirmed that *Barytelphusa jacquemontii* (Rathbun, 1905) [*Potamon (Potamonantes)*] is a junior synonym of *B. cunicularis* [*Thelphusa*] whereas *B. mccanni* [*Paratelphusa (Barytelphusa) mccanni*], once believed to be a synonym of *B. guerini* (Bott, 1970a), now revalidated as a distinct species, which was confirmed after comparing type specimen at ZSI, HQ, Kolkata.

### SYSTEMATIC LIST

Phylum ARTHROPODA Latreille, 1829

Subphylum CRUSTACEA Brünnich, 1772

Class MALACOSTRACA Latreille, 1802

Subclass EUMALACOSTRACA Grobben, 1892

Superorder EUCARIDA Calman, 1904

Order DECAPODA Latreille, 1803

Suborder PLEOCYEMATA Burkenroad, 1963

Infraorder BRACHYURA Linnaeus, 1758

Section EUBRACHYURA de Saint Laurent, 1980

Subsection HETEROTREMATA Guinot, 1977

Superfamily GECARCINUCOIDEA Rathbun, 1904

Family GECARCINUCIDAE Rathbun, 1904

1. *Gecarcinucus jacquemontii* H. Milne Edwards, 1844
2. *Gecarcinucus edwardsi* Alcock, 1909
3. *Barytelphusa cunicularis* (Westwood, 1836)
4. *Barytelphusa guerini* (H. Milne Edwards, 1853)
5. *Barytelphusa mccanni* (Chopra & Das, 1935)
6. *Vanni travancorica* (Henderson, 1913)
7. *Gubernatoriana gubernatoris* (Alcock, 1909)
8. *Gubernatoriana pilosipes* (Alcock, 1909)
9. *Inglethelphusa fronto* (Alcock, 1909)
10. *Oziotelphusa wagrakarowensis* (Rathbun, 1904)
11. *Spiralothelphusa hydrodroma* (Herbst, 1794)

## SYSTEMATIC ACCOUNT

Family GECARCINUCIDAE Rathbun, 1904

### 1. *Gecarcinucus jacquemontii* H. Milne Edwards, 1844 (Fig. 1A–G)

1844. *Gecarcinucus jacquemontii* H. Milne Edwards, in Jacquemont, *Voy. l'Inde*, **4**(2) : 4.  
 1906. *Gecarcinucus jacquemontii* Rathbun, *Nouv. Arch. Mus. Hist. nat. Paris*, (4)**8** : 67.  
 1910. *Gecarcinucus (Gecarcinucus) jacquemontii* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, **I**(2) : 122.  
 1970a. *Gecarcinucus jacquemontii* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 29.

*Type locality* : Near Pune, Maharashtra, India.

*Material examined* : 1 ♂, Nalla near Bombay-Pune Road, Talegaon, Pune dist., Maharashtra, Coll. B.S.L., 05. 11. 1973, C.667; 2 ♀, Kamshet, Pune dist., Maharashtra, Coll. Ramkrishna, 03. 08. 1979, C.895; 2 ♂, Mal near Talegaon, Pune dist., Maharashtra, Coll. Ramkrishna, 03. 08. 1979, C.761; 2 ♂, Rajapur Village, Dimbhe, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. P.P.K., 08. 11. 1993, C.396; 1 ♀, Bhorgiri & around, 7km south east of Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. P.P.K., 09. 11. 1993, C.395; 1 ♀, Malegaon Talav, near Panhala Fort, Kolhapur dist., Maharashtra, Coll. P.D.R., 05. 01. 2007, C.932 and 2 ♂ & 2 ♀, Near Blue Mormon Resort, Bhimashankar, Pune dist., Maharashtra, Coll. S.K.P., 01. 11. 2012, C.1128.

*Morphometry* : Males : CW : 28.9–37.56 (33.23±6.12); CL : 20.44–26.62 (23.53±4.37); CH : 15.6–20.28 (17.94±3.31) and Females : CW : 25.84–42.5 (34.17±11.78); CL : 18.16–28.9 (23.53±7.59); CH : 22.54–13.34 (17.94±6.51).

*Description* : Carapace much broader than long, slightly convex anteriorly and much narrow posteriorly; dorsal surface very smooth; anterolateral carapace strongly inflated in frontal view; anterolateral margin with finely granulated serrations; posterolateral margin very smooth; front very less wide, slightly less than one fifth of carapace width, lateral margins parallel; epigastric cristae poorly developed; postorbital cristae less distinct, not reaching anterolateral margin, very close to supraorbital margin; external orbital angle outer margin equal with inner margin; epibranchial tooth indiscernible; branchial regions highly inflated; cervical grooves deep, wide, intersecting and extending beyond level of postorbital cristae, reaching up to anterolateral margin; mesogastric groove long; frontal median triangle incomplete with only dorsal margin; epistomal median lobe semicircular, without median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod with long flagellum and longer than ischium. Chelipeds unequal and carpal spine distinct, blunt. Ambulatory legs smooth, dactylus longer than propodus; longest propodus more than thrice as long as broad. Suture between thoracic sternites 2, 3 and between 3, 4 indistinct, but with bunch of bristles. Male abdomen stout, almost triangular; sixth

male abdominal somite broader than long with slightly convex lateral margins, shorter than telson; telson very long, almost rectangle shaped, distal border with bunch of bristles; male abdominal cavity very deep and long, reaching up to level of third maxilliped base. G1 short; terminal segment slightly long (0.35 times length of subterminal segment), curved slightly outwards, tip blunt; subterminal segment slightly broader than terminal segment. G2 short; distal segment slightly long (0.3 times length of basal segment).

*Distribution* : India : Maharashtra (Kolhapur, Nashik and Pune).

*IUCN status* : Least Concern (Cumberlidge, 2008b).

*Remarks* : Endemic to northern Western Ghats. High population was observed near Bhimashankar in Pune district. Altitudinal range varied from 608 m to 968 m.

## 2. *Gecarcinucus edwardsi* Alcock, 1909

(Fig. 2A–G)

1909. *Gecarcinucus (Gecarcinucus) edwardsi*, [Wood-Mason, name only] Alcock, *Rec. Ind. Mus.*, **3**(4) : 380.

1910. *Gecarcinucus (Gecarcinucus) edwardsi* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, **I**(2) : 124.

1970a. *Gecarcinucus jacquemontii* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 29 (part) (not *Gecarcinucus jacquemontii* H. Milne Edwards, 1844).

*Type locality* : Khandala (=Khandalla), Pune district, Maharashtra, India.

*Material examined* : 1 ♀, Banganga Stream, 3km east Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 16. 10. 1973, C.854; 1 ♂, Stream near Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 20. 10. 1973, C.861; 1 ♂, Pandane River near Pandane Village, on Vani-Borgaon Road, Nashik dist., Maharashtra, Coll. M.S.P., 19. 09. 1987, C.867; 2 ♀, Khandala Ghat, Khopoli & around, Pune dist., Maharashtra, Coll. S.V.M. & Party, 13. 05. 1992, C.750; 1 ♀, Lake in Khandala, Pune dist., Maharashtra, Coll. M.S.P., 02. 07. 1992, C.696; 1 ♀, On the way to Shendi, Randa & around, Ahmednagar dist., Maharashtra, Coll. D.B.B., 09. 09. 2006, C.901; 3 ♂, Bhaka Devi & Around, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. S.K.P., 11. 08. 2011, C.468 and 1 ♀, Tiger Point, Lonavla, Pune dist., Maharashtra, Coll. S.S.J. & Party, 16. 09. 2011, C.1110.

*Morphometry* : Males : CW : 11.08–39.7 (32.62±12.22); CL : 8.14–29.92 (24.5±9.34); CH : 5.4–21.3 (17.67±6.88) and Females : CW : 15.66–25.12 (20.39±6.69); CL : 11.42–18.4 (14.91±4.94); CH : 7.84–12.52 (10.18±3.31).

*Description* : Carapace broader than long, highly convex anteriorly and abruptly narrow posteriorly; dorsal surface very smooth; anterolateral carapace strongly inflated in frontal view; anterolateral margin with finely granulated serrations; posterolateral margin with few fine oblique striations; front flat, very less wide, slightly more than one fifth of carapace width, lateral margins not parallel; epigastric cristae poorly developed; postorbital cristae indistinct; external orbital angle outer margin 1.5 times inner margin; epibranchial tooth indistinct; post orbital region

nearly flat; branchial regions highly inflated; cervical region highly inflated; cervical grooves deep, wide, slightly interrupted, extending beyond the level of postorbital cristae, not reaching up to anterolateral margin; mesogastric groove long; frontal median triangle incomplete with only dorsal margin; epistomal median lobe semicircular, without median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod with long flagellum and longer than ischium. Chelipeds unequal; finger cleft and nearby areas of inner surface of palm with bunch of bristles; large gap between fixed and movable fingers; carpal spine distinct, blunt. Ambulatory legs smooth, long, dactylus longer than propodus; longest propodus more than thrice as long as broad. Suture between thoracic sternites 2, 3 and between 3, 4 indistinct, but with bunch of bristles; sternites 1, 2, 3 and anterior portion of sternite 4 with bunch of bristles. Male abdomen stout, triangular; sixth male abdominal somite much broader than long, trapezoidal, with slightly concave lateral margins, quite shorter than telson; telson very long, nearly twice longer than broad, distal border with bunch of bristles; male abdominal cavity very deep and long, reaching up to level of third maxilliped base. G1 short; terminal segment long (0.45 times length of subterminal segment), tip blunt and slightly upturned; subterminal segment much broader than terminal segment. G2 short; distal segment slightly long (0.3 times the length of basal segment).

*Distribution* : India : Maharashtra (Ahmednagar, Nashik and Pune).

*IUCN status* : Data Deficient (Cumberlidge, 2008c).

*Remarks* : Endemic to northern Western Ghats. Bott (1970a) synonymized *G. edwardsi* with *G. jacquemontii*, but it is a valid species due to several distinct features: lateral margins of front not parallel (vs. lateral margins of front parallel), cervical grooves not reaching up to anterolateral margins (vs. cervical grooves reaching up to anterolateral margins), chelipeds with bunch of bristles (vs. chelipeds smooth), comparatively longer terminal segment (vs. comparatively shorter terminal segment) and subterminal segment much broader than terminal segment (vs. subterminal segment slightly broader than terminal segment). Altitudinal range varied from 302m to 955m.

### 3. *Barytelphusa cunicularis* (Westwood, 1836)

(Fig. 3A–G)

1836. *Thelphusa cunicularis* Westwood in Sykes & Westwood, *Trans. Linn. Soc. London*, **1** : 183.

1905. *Potamon (Potamonautes) jacquemonti* Rathbun, *Nouv. Arch. Mus. Hist. nat. Paris*, (4)**7** : 185.

1910. *Paratylphusa (Barytelphusa) jacquemontii* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, **I**(2) : 79.

1970a. *Barytelphusa (Barytelphusa) cunicularis* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 31.

2007. *Barytelphusa cunicularis* Bahir and Yeo, *Raffles B. Zool., Supp. No.* **16** : 312.

*Type locality* : Western Ghats from latitude 17° to 19° 23' N and longitude from 73° to 75° E (previously in Bombay Presidency), Maharashtra, India.

*Material examined* : 3 ♀, Nasardi River, Nashik dist., Maharashtra, Coll. R.N.C., 04. 02. 1958, C.872; 1 Ex., Bundgarden, Pune, Pune dist., Maharashtra, Coll. K.A.K., 25. 03. 1960, A/403; 2 Ex., Nala near Khed Shivapur, Pune dist., Maharashtra, Coll. M.M.C., 06. 12. 1960, A/128; 1 Ex., Mula river near Ammunition Factory Khadki (=Kirkee), Pune, Pune dist., Maharashtra, Coll. B.K.H., 24. 03. 1961, A/129; 10 Ex., Khed Shivapur, Pune dist., Maharashtra, Coll. B.K.H., 24. 03. 1961, A/404; 2 Ex., Khadki (=Kirkee), Pune, Pune dist., Maharashtra, Coll. B.K.H., 24. 03. 1961, A/406; 1 Ex., Mundhwa, Pune, Pune dist., Maharashtra, Coll. M.M.C., 26. 04. 1962, A/405; 3 Ex., Sambhaji Park, Pune, Pune dist., Maharashtra, Coll. R.N.C., 04. 03. 1963, A/391; 1 Ex., Lakdi Bridge, Pune, Pune dist., Maharashtra, Coll. R.N.C., 13. 03. 1963, A/381; 1 ♂, Mutha River near Sambhaji Park, Pune, Pune dist., Maharashtra, Coll. R.N.C., 12. 04. 1963, C.1010; 2 ♂ & 1 ♀, Bhaje Cave near Karla, Pune dist., Maharashtra, Coll. B.K.T., 05. 11. 1963, C.477; 5 ♂ & 3 ♀, Mula-Mutha River near Bund Garden, Pune, Pune dist., Maharashtra, Coll. R.N.C., 10. 12. 1963, C.953; 1 ♂, South side Village of Kottigehara, Chikkamagaluru dist., Karnataka, Coll. B.K.T., 01. 02. 1964, C.1054; 2 ♂ & 3 ♀, Mula River, Behind M.E.S. College, Pune, Pune dist., Maharashtra, Coll. R.N.C., 07. 03. 1964, C.943; 1 ♂, Mutha River behind Sambhaji Park, Pune, Pune dist., Maharashtra, Coll. R.N.C., 11. 03. 1964, C.1082; 12 Ex., Mundhwa Village, Pune dist., Maharashtra, Coll. R.N.C., 22. 07. 1964, C.1050; 1 ♂, Paud, Pune dist., Maharashtra, Coll. B.S.L., 25. 11. 1964, C.1063; 1 ♂, Satara Road, Pune, Pune dist., Maharashtra, Coll. Unknown, 01. 01. 1965, C.993; 1 ♀, Yerna Lake, Mahabaleshwar, Satara dist., Maharashtra, Coll. B.S.L., 14. 02. 1965, C.1070; 1 ♂, Yerna Rivulet, South of Strawberry Garden, Mahabaleshwar, Satara dist., Maharashtra, Coll. B.S.L., 15. 02. 1965, C.1035; 1 ♀, Yerna Rivulet above Lingmala Fall, Mahabaleshwar, Satara dist., Maharashtra, Coll. B.S.L., 16. 02. 1965, C.1066; 4 ♂ & 3 ♀, Strawberry Garden, Mahabaleshwar, Satara dist., Maharashtra, Coll. B.S.L., 22. 02. 1965, C.1013; 1 ♂, Koyna River, Panchgani Ghat Survey, Satara dist., Maharashtra, Coll. B.S.L., 26. 02. 1965, C.1061; 3 ♂, Mula River near Udham Engineering Works, Pune, Pune dist., Maharashtra, Coll. B.S.L., 05. 03. 1965, C.982; 2 ♂ & 1 ♀, River near Ambavane Village Bridge, Pune dist., Maharashtra, Coll. B.S.L., 24. 03. 1965, C.970; 1 ♂, Nalla near Pirangut, Pune, Pune dist., Maharashtra, Coll. B.S.L., 29. 06. 1965, C.948; 1 ♂, Pond on Sinhagad Road, Pune dist., Maharashtra, Coll. S.M.K., 24. 07. 1965, C.1038; 2 ♂, Lonavla, Pune dist., Maharashtra, Coll. B.S.L., 16. 10. 1965, C.950; 1 ♂, Khed Shivapur, Pune dist., Maharashtra, Coll. S.M.K., 31. 12. 1965, C.1046; 1 Ex., Pirangut, Pune, Pune dist., Maharashtra, Coll. R.N.C., 05. 07. 1966, C.1014; 18 ♂ & 4 ♀, Vadgaon, Pune dist., Maharashtra, Coll. B.S.L., 19. 08. 1966, C.983; 4 ♂ & 1 ♀, Vadgaon, Pune dist., Maharashtra, Coll. B.S.L., 09. 09. 1966, C.959; 1 Ex., Moshi, Pune dist., Maharashtra, Coll. B.S.L., 8. 11. 1966, C.762; 1 ♀, Kowdi, Pune dist., Maharashtra, Coll. R.N.C., 25. 05. 1967, C.978; 1 ♂ & 2 ♀, Moshi, Pune, Pune dist., Maharashtra, Coll. R.N.C., 22. 06. 1967, C.977; 2 ♀, Khed, Pune, Pune dist., Maharashtra, Coll. R.N.C., 13. 07. 1967, C.944; 2 ♂, Khed, Pune, Pune dist., Maharashtra, Coll. R.N.C., 08. 09. 1967, C.1007; 2 ♂ & 1 ♀, Kamthadi, Pune dist., Maharashtra, Coll. B.S.L., 16. 10. 1967,

C.1034; 2♂ & 4♀, Bhivri, Pune dist., Maharashtra, Coll. B.S.L., 11. 11. 1967, C.955; 1♂ & 1♀, Khed, Pune, Pune dist., Maharashtra, Coll. B.S.L., 30. 11. 1967, C.951; 2♂, Khed, Pune, Pune dist., Maharashtra, Coll. B.S.L., 28. 12. 1967, C.967; 2♂, 40km away from Lasalgaon, Nashik dist., Maharashtra, Coll. R.N.C., 22. 01. 1968, C.946; 1♂, Kalwan, Nashik dist., Maharashtra, Coll. R.N.C., 25. 01. 1968, C.1065; 1♂ & 2♀, Nasardi River, Nashik, Nashik dist., Maharashtra, Coll. R.N.C., 03. 02. 1968, C.434; 1♂ & 1♀, Godavari River, Tapovan, Nashik, Nashik dist., Maharashtra, Coll. R.N.C., 05. 02. 1968, C.430; 3♀, Trimbak, Nashik dist., Maharashtra, Coll. R.N.C., 06. 02. 1968, C.961; 4♂ & 1♀, Dargah of Noor Shah, Aurangabad, Aurangabad dist., Maharashtra, Coll. B.S.L., 13. 02. 1968, C.435; 4♂ & 1♀, Khed, Pune dist., Maharashtra, Coll. B.S.L., 16. 02. 1968, C.1160; 1♀, Talegaon, Pune dist., Maharashtra, Coll. B.S.L., 02. 03. 1968, C.990; 2♂ & 2♀, Sambhaji Bridge, Pune, Pune dist., Maharashtra, Coll. R.N.C., 13. 03. 1968, C.954; 1♂ & 2♀, Moshi, Pune, Pune dist., Maharashtra, Coll. R.N.C., 28. 03. 1968, C.992; 1♂, Khed, Pune, Pune dist., Maharashtra, Coll. R.N.C., 28. 03. 1968, C.1004; 2♀, Sambhaji Bridge, Pune, Pune dist., Maharashtra, Coll. R.N.C., 18. 04. 1968, C.958; 26 Ex., Khed Shivapur, Pune dist., Maharashtra, Coll. R.N.C., 01. 08. 1968, C.1077; 4♂ & 4♀, Khed Shivapur, Pune dist., Maharashtra, Coll. R.N.C., 12. 09. 1968, C.956; 3♂ & 5♀, Bopdevghat, Pune dist., Maharashtra, Coll. B.S.L., 28. 09. 1968, C.1005; 1♂ & 2♀, Nashrapur, Pune dist., Maharashtra, Coll. B.S.L., 21. 11. 1968, C.744; 1♂, Mosam River near Satana Village, Kalwan, Nashik dist., Maharashtra, Coll. R.N.C., 26. 11. 1968, C.1048; 2♂ & 3♀, Waghori River, Ajanta, Aurangabad dist., Maharashtra, Coll. B.S.L., 15. 12. 1968, C.1062; 4♂, Waghori River, Ajanta, Aurangabad dist., Maharashtra, Coll. B.S.L., 17. 12. 1968, C.429; 3♂ & 3♀, Godavari River Basin Survey, Sultangad, Aurangabad dist., Maharashtra, Coll. B.S.L., 19. 12. 1968, C.883; 1♂, Sultangad, Aurangabad dist., Maharashtra, Coll. B.S.L., 21. 12. 1968, C.981; 1♀, Sultangad, Aurangabad dist., Maharashtra, Coll. Unknown, 21. 12. 1968, C.408; 2♂, Sultangad, Aurangabad dist., Maharashtra, Coll. Unknown, 21. 12. 1968, C.409; 1♂, Shahgad, Jalna dist., Maharashtra, Coll. B.S.L., 22. 12. 1968, C.1041; 2♂ & 1♀, Shahgad near Bridge, Jalna dist., Maharashtra, Coll. B.S.L., 23. 12. 1968, C.1032; 1♀, Near Kuran Village, Shahgad, Jalna dist., Maharashtra, Coll. B.S.L., 24. 12. 1968, C.1064; 1♀, Yelganga River, Aurangabad?, Aurangabad dist., Maharashtra, Coll. B.S.L., 26. 12. 1968, C.1042; 5♂ & 4♀, Godavari River Basin Survey, Paithan, Aurangabad dist., Maharashtra, Coll. B.S.L., 27. 12. 1968, C.494; 1♂, Wadoli River, Ajanta, Aurangabad dist., Maharashtra, Coll. B.S.L., 28. 12. 1968, C.1040; 1♂ & 4♀, Nashrapur, Pune dist., Maharashtra, Coll. R.N.C., 13. 03. 1969, C.952; 1♂, Saswad, Pune dist., Maharashtra, Coll. R.N.C., 20. 03. 1969, C.985; 2♂ & 3♀, Ambenalli, Satara dist., Maharashtra, Coll. K.R.R., 10. 05. 1969, C.1006; 1♀, Pirangut, Pune, Pune dist., Maharashtra, Coll. R.N.C., 22. 05. 1969, C.966; 1♂, Kamthadi, Pune dist., Maharashtra, Coll. R.N.C., 16. 06. 1969, C.968; 1♀, Pirangut, Pune, Pune dist., Maharashtra, Coll. R.N.C., 19. 06. 1969, C.945; 1♀, Khed Shivapur, Pune dist., Maharashtra, Coll. R.N.C., 26. 06. 1969, C.699;

3 ♀, Khed Shivapur, Pune dist., Maharashtra, Coll. R.N.C., 10. 07. 1969, C.996; 5 Ex., Pirangut, Pune, Pune dist., Maharashtra, Coll. R.N.C., 17. 07. 1969, C.1033; 2 ♂, Shindewadi, Pune dist., Maharashtra, Coll. R.N.C., 14. 09. 1969, C.974; 3 ♂ & 5 ♀, Shindewadi, Pune dist., Maharashtra, Coll. B.S.L., 30. 10. 1969, C.975; 1 ♀, Kamthadi, Pune dist., Maharashtra, Coll. B.S.L., 30. 10. 1969, C.890; 2 ♂ & 7 ♀, Probably from Mula/Mutha River, Pune, Pune dist., Maharashtra, Coll. Purchased (Unknown), 03. 11. 1969, C.886; 1 ♂, Pirangut, Pune, Pune dist., Maharashtra, Coll. B.S.L., 06. 11. 1969, C.1044; 5 ♂ & 4 ♀, Pune, Pune dist., Maharashtra, Coll. Purchased (Unknown), 08. 11. 1969, C.887; 2 ♂ & 2 ♀, Kamthadi, Pune, Pune dist., Maharashtra, Coll. B.S.L., 18. 12. 1969, C.1025; 4 ♂ & 2 ♀, Shahgad, Jalna dist., Maharashtra, Coll. B.S.L., 16. 02. 1970, C.1028; 1 ♂, Shahgad, Jalna dist., Maharashtra, Coll. B.S.L., 19. 02. 1970, C.407; 1 ♀, Gangakhed, Parbhani dist., Maharashtra, Coll. B.S.L., 21. 02. 1970, C.438; 4 ♂ & 3 ♀, Manjlegaon, Beed dist., Maharashtra, Coll. B.S.L., 26. 02. 1970, C.427; 1 ♂ & 1 ♀, Aurangabad, Aurangabad dist., Maharashtra, Coll. B.S.L., 01. 03. 1970, C.1016; 3 ♀, Aurangabad, Aurangabad dist., Maharashtra, Coll. B.S.L., 01. 03. 1970, C.1029; 1 ♂, Sailu, Parbhani dist., Maharashtra, Coll. B.S.L., 06. 03. 1970, C.422; 1 ♂ & 1 ♀, Khandali, Parbhani dist., Maharashtra, Coll. B.S.L., 07. 03. 1970, C.1076; 1 ♂, Pirangut, Pune, Pune dist., Maharashtra, Coll. R.N.C., 12. 03. 1970, C.1015; 2 ♂ & 1 ♀, Pirangut, Pune, Pune dist., Maharashtra, Coll. R.N.C., 26. 03. 1970, C.1027; 1 ♂, Talegaon, Pune dist., Maharashtra, Coll. R.N.C., 23. 04. 1970, C.988; 2 Ex., Vadgaon (=Wadgaon), Pune dist., Maharashtra, Coll. K.R.R., 29. 06. 1970, C.1075; 3 ♂, Nalla near Municipal Tank, Talegaon, Pune dist., Maharashtra, Coll. M.S.P., 10. 07. 1970, C.682; 1 ♂, Bhosari, Pune dist., Maharashtra, Coll. R.N.C., 31. 07. 1970, C.686; 19 Ex., Moshi, Pune, Pune dist., Maharashtra, Coll. M.M.C., 20. 08. 1970, C.1023; 6 ♂ & 3 ♀, Paud, Pune dist., Maharashtra, Coll. R.N.C., 18. 09. 1970, C.664; 2 ♂ & 1 ♀, Paud, Pune dist., Maharashtra, Coll. K.R.R., 26. 10. 1970, C.1024; 1 ♂ & 1 ♀, Kamshet, Pune dist., Maharashtra, Coll. K.R.R., 20. 11. 1970, C.980; 1 ♂, Purna River at Purna, Parbhani dist., Maharashtra, Coll. R.N.C., 26. 11. 1970, C.424; 1 ♂ & 1 ♀, Nalla Way to Pune-Nanded Road, Pune, Pune dist., Maharashtra, Coll. R.N.C., 28. 11. 1970, C.431; 1 ♂, Naigaon, Nanded dist., Maharashtra, Coll. R.N.C., 01. 12. 1970, C.437; 1 ♂, Kamshet, Pune dist., Maharashtra, Coll. B.S.L., 10. 12. 1970, C.1030; 2 ♂ & 1 ♀, Sandurli Village, Devimane Ghat, Uttar Kannada dist., Karnataka, Coll. B.S.L., 13. 02. 1971, C.1069; 3 ♂ & 2 ♀, Western Ghats, Ramanguli, Uttar Kannada dist., Karnataka, Coll. B.S.L., 17. 02. 1971, C.963; 2 ♂ & 1 ♀, Western Ghats, Ramanguli, Uttar Kannada dist., Karnataka, Coll. B.S.L., 18. 02. 1971, C.1039; 4 ♂ & 2 ♀, Western Ghats, Ramanguli, Uttar Kannada dist., Karnataka, Coll. B.S.L., 19. 02. 1971, C.962; 1 ♀, Gangavali River, Ramanguli, Uttar Kannada dist., Karnataka, Coll. B.S.L., 20. 02. 1971, C.1043; 4 ♂ & 8 ♀, Kamshet, Pune dist., Maharashtra, Coll. R.N.C., 20. 02. 1971, C.733; 3 ♂, Magod Falls, Uttar Kannada dist., Karnataka, Coll. B.S.L., 25. 02. 1971, C.1019; 6 ♂ & 4 ♀, Kamshet, Pune dist., Maharashtra, Coll. R.N.C., 27. 02. 1971, C.493; 2 ♂ & 3 ♀, Kamthadi, Pune dist., Maharashtra, Coll. B.S.L., 10. 04. 1971, C.688; 7 ♂ & 2 ♀, Rajbaug, Pune, Pune dist., Maharashtra, Coll. R.N.C., 25. 06. 1971, C.998;

3 ♀, Kondhapuri, Pune dist., Maharashtra, Coll. B.S.L., 08. 07. 1971, C.697; 2 ♂, Rajbaug, Pune, Pune dist., Maharashtra, Coll. R.N.C., 16. 07. 1971, C.991; 2 ♂, Khed, Pune, Pune dist., Maharashtra, Coll. K.R.R., 23. 07. 1971, C.994; 1 ♂ & 1 ♀, Sikarghat, Nanded dist., Maharashtra, Coll. K.R.R., 10. 08. 1971, C.419; 2 ♂ & 1 ♀, Manjira River near Biloli, Nanded dist., Maharashtra, Coll. K.R.R., 14. 08. 1971, C.428; 1 ♀, Nalla 2km south of Dharmabad, Nanded dist., Maharashtra, Coll. K.R.R., 15. 08. 1971, C.1011; 3 ♂ & 1 ♀, Nalla at Kabarali Village, Nanded dist., Maharashtra, Coll. K.R.R., 16. 08. 1971, C.1001; 8 ♂ & 1 ♀, Nalla at Naigaon, Nanded dist., Maharashtra, Coll. K.R.R., 19. 08. 1971, C.1052; 1 ♀, Anullah, 5km from Rest House Gangakhed, Parbhani dist., Maharashtra, Coll. K.R.R., 22. 08. 1971, C.417; 1 ♂, Godavari River, about 10km North of Gangakhed, Parbhani dist., Maharashtra, Coll. K.R.R., 24. 08. 1971, C.425; 9 Ex., Bhokar, Nanded dist., Maharashtra, Coll. K.R.R., 27. 08. 1971, C.1051; 10 ♂ & 2 ♀, Rajbaug (Loni), Pune dist., Maharashtra, Coll. B.S.L., 28. 08. 1971, C.718; 1 ♀, 5km south of Bhokar, Nanded dist., Maharashtra, Coll. K.R.R., 30. 08. 1971, C.986; 3 ♂ & 3 ♀, Kondhapuri, Pune dist., Maharashtra, Coll. B.S.L., 02. 09. 1971, C.747; 2 ♂ & 5 ♀, Rajbaug, Pune dist., Maharashtra, Coll. B.S.L., 18. 09. 1971, C.670; 2 ♂ & 5 ♀, Rajbaug, Pune dist., Maharashtra, Coll. B.S.L., 08. 10. 1971, C.738; 3 ♂ & 7 ♀, Khed, Pune dist., Maharashtra, Coll. K.R.R., 15. 10. 1971, C.731; 6 ♂ & 10 ♀, Rajbagh, Pune, Pune dist., Maharashtra, Coll. B.S.L., 23. 10. 1971, C.1148; 2 ♀, Koregaon, Pune, Pune dist., Maharashtra, Coll. B.S.L., 25. 10. 1971, C.1008; 22 ♂ & 15 ♀, Kondhapuri, Pune dist., Maharashtra, Coll. B.S.L., 11. 11. 1971, C.757; 2 ♂ & 2 ♀, Khed, Pune dist., Maharashtra, Coll. K.R.R., 19. 11. 1971, C.685; 2 ♂ & 3 ♀, Rajbaug, Pune dist., Maharashtra, Coll. B.S.L., 26. 11. 1971, C.700; 5 ♂ & 3 ♀, Kondhapuri, Pune dist., Maharashtra, Coll. B.S.L., 02. 12. 1971, C.729; 3 ♂ & 3 ♀, Khed, Pune dist., Maharashtra, Coll. K.R.R., 13. 12. 1971, C.737; 1 ♂, Moshi, Pune dist., Maharashtra, Coll. K.R.R., 13. 12. 1971, C.693; 2 ♂ & 8 ♀, Patas, Pune dist., Maharashtra, Coll. B.S.L., 18. 12. 1971, C.708; 2 ♀, Rajbaug, Pune dist., Maharashtra, Coll. B.S.L., 18. 12. 1971, C.752; 2 ♂, Khed, Pune dist., Maharashtra, Coll. K.R.R., 14. 01. 1972, C.1047; 4 ♂ & 5 ♀, Kondhapuri, Pune dist., Maharashtra, Coll. M.B.R., 17. 01. 1972, C.687; 3 ♂ & 1 ♀, River at Bedthi, Yellapur, Uttar Kannada dist., Karnataka, Coll. B.S.L., 25. 01. 1972, C.391; 2 ♀, Rajbaug, Pune dist., Maharashtra, Coll. K.R.R., 28. 01. 1972, C.679; 4 ♂ & 3 ♀, Ambligola Reservoir, Shimoga dist., Karnataka, Coll. B.S.L., 02. 02. 1972, C.399; 5 ♂, Mastimane, Jog Fall, Uttar Kannada dist., Karnataka, Coll. B.S.L., 08. 02. 1972, C.383; 10 ♂, Mastimane, Jog Fall, Uttar Kannada dist., Karnataka, Coll. B.S.L., 08. 02. 1972, C.384; 13 ♂ & 7 ♀, Nalla at 392 milestone on Jog-Honnar Road, Uttar Kannada dist., Karnataka, Coll. B.S.L., 09. 02. 1972, C.388; 5 ♂, Nalla at 382 milestone Bangalore-Honnar Road, Uttar Kannada dist., Karnataka, Coll. B.S.L., 10. 02. 1972, C.373; 2 ♂ & 1 ♀, Nalla at 381 milestone Jog Honnar Road, Uttar Kannada dist., Karnataka, Coll. B.S.L., 11. 02. 1972, C.375; 3 ♂, Sirasi, Uttar Kannada dist., Karnataka, Coll. B.S.L., 13. 02. 1972, C.372; 9 ♂, Sirasi, Uttar Kannada dist., Karnataka, Coll. B.S.L., 13. 02. 1972, C.381; 18 ♂ & 5 ♀, Dandeli, Uttar

Kannada dist., Karnataka, Coll. B.S.L., 18. 02. 1972, C.377; 2♂, Kondhapuri, Pune dist., Maharashtra, Coll. M.B.R., 24. 02. 1972, C.720; 1♀, Moshi, Pune, Pune dist., Maharashtra, Coll. K.R.R., 04. 03. 1972, C.995; 2♂ & 1♀, Rajbaug, Pune dist., Maharashtra, Coll. B.S.L., 17. 03. 1972, C.732; 1♀, Khed, Pune, Pune dist., Maharashtra, Coll. K.R.R., 25. 03. 1972, C.976; 1♂ & 1♀, Moshi, Pune, Pune dist., Maharashtra, Coll. K.R.R., 25. 03. 1972, C.987; 2♂ & 1♀, Kondhapuri, Pune dist., Maharashtra, Coll. M.B.R., 30. 03. 1972, C.674; 2♂ & 1♀, Koregaon, Pune dist., Maharashtra, Coll. M.B.R., 30. 03. 1972, C.684; 1♂ & 1♀, Bhor, Pune dist., Maharashtra, Coll. B.S.L., 10. 04. 1972, C.482; 1♂, Uruli Kanchan, Pune dist., Maharashtra, Coll. K.R.R., 14. 04. 1972, C.680; 1♀, Nira, Pune, Pune dist., Maharashtra, Coll. M.B.R., 20. 04. 1972, C.1018; 1♀, Rajbaug, Pune dist., Maharashtra, Coll. K.R.R., 23. 05. 1972, C.678; 1♀, Dheku River, 35km from Vaijapur, Aurangabad dist., Maharashtra, Coll. M.B.R., 24. 06. 1972, C.416; 1♀, Godavari Bridge, Paithan, On Nagar Road, Aurangabad dist., Maharashtra, Coll. M.B.R., 26. 06. 1972, C.413; 1♀, Godavari River, Jaikwadi (North), Paithan, Aurangabad dist., Maharashtra, Coll. M.B.R., 27. 06. 1972, C.411; 1♂, G.R.B.S, Nala at Chalisgaon Road, Aurangabad dist., Maharashtra, Coll. M.B.R., 21. 07. 1972, C.939; 1♂, Rajbaug (Loni), Pune dist., Maharashtra, Coll. K.R.R., 16. 09. 1972, C.1000; 6♂ & 3♀, Shindewadi, Pune dist., Maharashtra, Coll. B.K.T., 29. 09. 1972, C.899; 10♂ & 7♀, Fitzgerald Pass, Satara dist., Maharashtra, Coll. A.P.K., 05. 10. 1972, C.781; 4♂, Ambevali Nalla, Satara dist., Maharashtra, Coll. M.B.R., 09. 02. 1973, C.406; 1♂, Western Ghats, Math Nalla, Ratnagiri dist., Maharashtra, Coll. M.B.R., 14. 02. 1973, C.1072; 2♂ & 2♀, Shrungartali Nalla, Ratnagiri dist., Maharashtra, Coll. M.B.R., 16. 02. 1973, C.845; 1♀, Kondmala River, Western Ghat, Ratnagiri dist., Maharashtra, Coll. M.B.R., 18. 02. 1973, C.393; 1♂, Niruke Nalla, Sindhudurg dist., Maharashtra, Coll. M.B.R., 01. 03. 1973, C.382; 3♂ & 2♀, Western Ghats, Madkhol River, Sindhudurg dist., Maharashtra, Coll. M.B.R., 05. 03. 1973, C.849; 2♂ & 3♀, Kondhapuri, Pune dist., Maharashtra, Coll. G.M.Y., 23. 08. 1973, C.1026; 1♂ & 1♀, Wagholi, Pune dist., Maharashtra, Coll. G.M.Y., 23. 08. 1973, C.1012; 3♂, Aram River, Satana, Nashik dist., Maharashtra, Coll. M.B.R., 22. 09. 1973, C.441; 2♂ & 4♀, Rathir Talab, 20km north east of Deola, Nashik dist., Maharashtra, Coll. M.B.R., 24. 09. 1973, C.863; 1♀, Bedi River, Abhona, Nashik dist., Maharashtra, Coll. M.B.R., 25. 09. 1973, C.400; 5♀, Nalla at Mangrul, Nashik dist., Maharashtra, Coll. M.B.R., 29. 09. 1973, C.420; 2♂ & 1♀, Nandur-Madhymeshwar, Bandhara, Nashik dist., Maharashtra, Coll. M.B.R., 02. 10. 1973, C.851; 4♂, Nalla at Yesgaon, Ahmednagar dist., Maharashtra, Coll. M.B.R., 12. 10. 1973, C.432; 1♀, Nalla at Yesgaon, Ahmednagar dist., Maharashtra, Coll. M.B.R., 12. 10. 1973, C.433; 1♂ & 1♀, Stream near Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 15. 10. 1973, C.439; 3♂ & 2♀, Stream near Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 15. 10. 1973, C.440; 3♂ & 3♀, Banganga Stream, 3km east Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 16. 10. 1973, C.852; 2♂, Pundi Nalla, 8km east of Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 17. 10. 1973, C.414; 7♂ & 13♀, Stream near Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 20. 10. 1973, C.859; 2♀, Nalla near Bombay-Pune Road,

Talegaon, Pune dist., Maharashtra, Coll. B.S.L., 05. 11. 1973, C.666; 4♂ & 1♀, Pernem, North Goa dist., Goa, Coll. B.S.L., 08. 12. 1973, C.639; 1♂, Mutha River, Near Sambhaji Bridge, Pune dist., Maharashtra, Coll. N.C.N., 14. 02. 1974, C.742; 1♂, Mula Mutha River, Bund Garden, Pune, Pune dist., Maharashtra, Coll. A.S.M., 19. 02. 1974, C.1049; 1♂, Nalla near Kondhwa Village, 15km east of Pune, Pune dist., Maharashtra, Coll. C.B.P., 06. 06. 1974, C.1017; 1♂, Kondhwa Village, 15km east of Pune, Pune dist., Maharashtra, Coll. G.M.Y., 07. 08. 1974, C.1022; 12♂ & 4♀, Nalla near Katraj Tank, Pune dist., Maharashtra, Coll. P.R.S., 23. 08. 1974, C.712; 4♂ & 5♀, Nalla of Khadakwasla Lake (Dam), Pune dist., Maharashtra, Coll. A.S.M., 29. 08. 1974, C.1152; 1♂, Katrajgaon, ca 15km south of Pune, Pune dist., Maharashtra, Coll. E.V.M., 07. 011. 1974, C.1058; 1♂ & 1♀, Pashan Village, Pune dist., Maharashtra, Coll. A.S.M., 03. 12. 1974, C.675; 4♂ & 6♀, Loni, Pune, Pune dist., Maharashtra, Coll. E.V.M. & Party, 05. 02. 1975, C.1147; 1♂, Kalbhor River near Kalbhor village, Pune dist., Maharashtra, Coll. G.M.Y. & Party, 19. 02. 1975, C.698; 2♂ & 1♀, Nalla near Katrajgaon, Pune dist., Maharashtra, Coll. R.H.K. & Party, 26. 02. 1975, C.766; 1♂, Paud, Pune dist., Maharashtra, Coll. M.B.R. & Party, 16. 07. 1975, C.745; 4♂ & 11♀, Pirangut, Pune dist., Maharashtra, Coll. M.B.R., 16. 07. 1975, C.689; 1♀, Theur, Pune dist., Maharashtra, Coll. E.V.M. & Party, 29. 07. 1975, C.843; 1♂, Katraj Nalla & Tank, Pune dist., Maharashtra, Coll. B.K.T. & Party, 30. 12. 1975, C.669; 1♂ & 1♀, Malavli near Indrayani River, Pune dist., Maharashtra, Coll. M.B.R., 29. 04. 1976, C.677; 2♂, Katraj Tank, Pune dist., Maharashtra, Coll. B.K.T., 13. 02. 1976, C.702; 1♂, Loni, Pune dist., Maharashtra, Coll. K.R., 13. 08. 1976, C.754; 2♂, Pashan Tank, Pune dist., Maharashtra, Coll. B.K.T., 07. 02. 1976, C.758; 1♂ & 3♀, Indrayani River at Moshi, Pune dist., Maharashtra, Coll. G.M.Y., 13. 04. 1976, C.763; 1♂, Koyna River near Par Village, Satara dist., Maharashtra, Coll. M.B.R., 24. 10. 1976, C.793; 2♂, Khadakwasla, Pune dist., Maharashtra, Coll. A.S.M., 19. 01. 1977, C.668; 5♂ & 8♀, Vir Dam near Tondal Village, Satara dist., Maharashtra, Coll. B.K.T., 29. 01. 1977, C.782; 5♂, Rajbaug, Pune dist., Maharashtra, Coll. M.B.R., 23. 02. 1977, C.755; 1♂, Uruli Kanchan, Pune dist., Maharashtra, Coll. M.B.R., 23. 02. 1977, C.660; 5♂, Loni, Pune dist., Maharashtra, Coll. M.S.P., 10. 06. 1977, C.704; 1♂, Ghode Nadi, Shirval, Satara dist., Maharashtra, Coll. G.M.Y., 02. 07. 1977, C.681; 1♂, Kharadi nalla on Pune-Nagar Road, Pune, Pune dist., Maharashtra, Coll. G.M.Y., 02. 07. 1977, C.662; 2♂ & 1♀, Wagholi, Pune dist., Maharashtra, Coll. M.B.R., 15. 09. 1977, C.665; 1♂, Wagholi Pond, Pune dist., Maharashtra, Coll. M.B.R., 13. 10. 1977, C.663; 1♀, Wagholi, Pond Part-III, Pune dist., Maharashtra, Coll. M.B.R., 13. 10. 1977, C.896; 1♂, Wagholi, Pune dist., Maharashtra, Coll. M.B.R., 20. 10. 1977, C.722; 3♂ & 1♀, Wagholi, Pune dist., Maharashtra, Coll. M.B.R., 26. 10. 1977, C.671; 1♂ & 1♀, Wagholi, Pune dist., Maharashtra, Coll. M.B.R., 26. 10. 1977, C.661; 1♂, Wagholi, Pune dist., Maharashtra, Coll. M.B.R., 26. 10. 1977, C.736; 2♂ & 1♀, Wagholi, Pune dist., Maharashtra, Coll. M.B.R., 27. 10. 1977, C.734; 1♂ & 2♀, Khandala, Pune dist., Maharashtra, Coll. M.B.R. & Party, 29. 10. 1977, C.719; 1♀, Wagholi, Pune dist., Maharashtra, Coll. M.B.R., 14. 11. 1977, C.759; 1♂ & 1♀, Wagholi, Pune dist., Maharashtra, Coll. M.B.R.,

07. 11. 1977, C.481; 2 ♀, Wagholi, Pune dist., Maharashtra, Coll. M.B.R., 22. 12. 1977, C.723; 1 ♂, Donje Village, Pune dist., Maharashtra, Coll. A.S.M., 26. 05. 1978, C.740; 2 ♂ & 1 ♀, Panchanganga River, Hevwad, Kolhapur dist., Maharashtra, Coll. M.S.P. & Party, 07. 06. 1978, C.936; 1 ♀, Hiranyakeshi River, Ajra, Kolhapur dist., Maharashtra, Coll. M.S.P. & Party, 11. 06. 1978, C.814; 1 ♂, Nalla near Kondhapuri, Pune dist., Maharashtra, Coll. R.H.K., 16. 10. 1978, C.725; 3 ♂ & 3 ♀, Sonke-Pandharpur, Solapur dist., Maharashtra, Coll. A.S.M., 15. 11. 1978, C.778; 2 ♂ & 2 ♀, Sangvi Village, Akkalkot, Solapur dist., Maharashtra, Coll. A.S.M., 19. 11. 1978, C.779; 1 ♀, Shirshi Village, Akkalkot, Solapur dist., Maharashtra, Coll. A.S.M., 20. 11. 1978, C.818; 1 ♂, Alipur, Barshi, Solapur dist., Maharashtra, Coll. A.S.M., 26. 11. 1978, C.788; 2 ♂, Pathurd Lake, Barchi, Solapur dist., Maharashtra, Coll. A.S.M., 27. 11. 1978, C.772; 1 ♂, Pangaon, Barshi, Solapur dist., Maharashtra, Coll. A.S.M., 28. 11. 1978, C.791; 1 ♂ & 1 ♀, Pathardi Lake?, Latur Road, Solapur? dist., Maharashtra, Coll. A.S.M., 29. 11. 1978, C.474; 1 ♂, Kamshet near Animal Hospital, Pune dist., Maharashtra, Coll. M.S.P., 02. 01. 1979, C.714; 2 ♂, Girnar River, Theka, Jalgaon dist., Maharashtra, Coll. R.H.K., 20. 01. 1979, C.804; 3 ♂ & 2 ♀, Waghur River, Wakod, Jalgaon dist., Maharashtra, Coll. R.H.K., 21. 01. 1979, C.774; 1 ♀, Tapi River, Daulatpura, Jalgaon dist., Maharashtra, Coll. R.H.K., 23. 01. 1979, C.813; 2 ♀, Mahamud Pena Nalla, Jalgaon dist., Maharashtra, Coll. R.H.K., 25. 01. 1979, C.776; 1 ♀, Bodwad Tank, Bodwad, Jalgaon dist., Maharashtra, Coll. R.H.K., 08. 02. 1979, C.770; 1 ♂, Sur River, Wadi, Jalgaon dist., Maharashtra, Coll. R.H.K., 09. 02. 1979, C.807; 1 ♂ & 1 ♀, Dev River, Yengaon, Bodhawad, Jalgaon dist., Maharashtra, Coll. R.H.K., 10. 02. 1979, C.812; 2 ♂, Kang River, Jamner, Jalgaon dist., Maharashtra, Coll. R.H.K., 12. 02. 1979, C.811; 5 ♂ & 6 ♀, Lahasar Nalla, Jamner, Jalgaon dist., Maharashtra, Coll. R.H.K., 12. 02. 1979, C.897; 10 ♂ & 7 ♀, Waghur River, Chinchked, Jalgaon dist., Maharashtra, Coll. R.H.K., 14. 02. 1979, C.775; 6 ♂ & 3 ♀, Kawadi, Pune-Solapur Road, Pune dist., Maharashtra, Coll. K.M., 09. 03. 1979, C.692; 2 ♀, Rajapur Tank, Bhimashankar-Pune, Pune dist., Maharashtra, Coll. A.S.M., 30. 05. 1979, C.715; 2 ♂, Ghod River, Bhimashankar-Pune, Pune dist., Maharashtra, Coll. A.S.M., 31. 05. 1979, C.690; 1 ♂, Mal near Talegaon, Pune dist., Maharashtra, Coll. Ramkrishna, 03. 08. 1979, C.760; 2 ♂, Bhilwadi-Tasgaon, Sangli dist., Maharashtra, Coll. A.S.M., 12. 09. 1979, C.480; 5 ♂ & 3 ♀, Nalla near Vita, Sangli dist., Maharashtra, Coll. A.S.M., 15. 09. 1979, C.903; 1 ♂ & 2 ♀, Yerale River, Ambegaon, Vita-Sangli, Sangli dist., Maharashtra, Coll. A.S.M., 17. 09. 1979, C.912; 5 ♂ & 4 ♀, Tupari-Takari, Sangli dist., Maharashtra, Coll. A.S.M., 20. 09. 1979, C.999; 2 ♀, Pawana Dam, Pune dist., Maharashtra, Coll. K.M. & Party, 15. 12. 1979, C.751; 3 ♂ & 3 ♀, Purandar, Pune dist., Maharashtra, Coll. M.S.P., 04. 09. 1981, C.726; 1 ♂, Birwadi Village, near Dasgaon, Mahad, Raigad dist., Maharashtra, Coll. M.S.P., 17. 09. 1981, C.868; 2 ♂ & 1 ♀, Nevade Village & around, Karjat, Raigad dist., Maharashtra, Coll. M.S.P., 05. 10. 1981, C.479; 2 ♂, Bhivari Nalla, Pune dist., Maharashtra, Coll. A.S.M., 21. 11. 1981, C.713; 3 ♂, Yawat, Pune dist., Maharashtra, Coll. S.V.M., 05. 03. 1982, C.728; 4 ♂ & 1 ♀, Bhima River, Sangavi Village, Talegaon-Dhamdhare, Pune dist., Maharashtra, Coll. M.S.P., 28. 03. 1983, C.683; 1 ♂ & 2 ♀,

Vadaj Dam, Mina River, Shivneri, Pune dist., Maharashtra, Coll. M.S.P., 06. 07. 1983, C.741; 1 ♀, Bridge on Mula River, Pune dist., Maharashtra, Coll. M.S.P., 29. 07. 1983, C.676; 1 ♂, Sina River, Kolegaon, Solapur dist., Maharashtra, Coll. A.S.M., 28. 08. 1983, C.907; 1 ♀, Sina River at Malik Peth, Mohol, Solapur dist., Maharashtra, Coll. A.S.M., 30. 08. 1983, C.906; 1 ♀, Murbadi River, Ghorle Village, Murbad, Thane dist., Maharashtra, Coll. M.S.P., 20. 03. 1984, C.941; 1 ♀, Machundi, 22km east of Jat on Umadi Road, Sangli dist., Maharashtra, Coll. A.S.M. & Party, 19. 09. 1984, C.914; 2 ♂, Stream near Sendwa, Check post on Maharashtra & Madhya Pradesh border, Dhule dist., Maharashtra, Coll. M.S.P., 29. 11. 1985, C.799; 4 ♂ & 2 ♀, Jamkhel River, Samoda, 6km north east of Pimpalner, Sakri Taluka, Dhule dist., Maharashtra, Coll. R.H.K., 21. 12. 1985, C.794; 3 ♂ & 4 ♀, Panjra River, Samoda, 7km north east of Pimpalner, Sakri Taluka, Dhule dist., Maharashtra, Coll. R.H.K., 21. 12. 1985, C.771; 1 ♂, Bedakipat, 11km west of Navapur on Surat Road, Navapur Taluka, Nandurbar dist., Maharashtra, Coll. R.H.K., 28. 12. 1985, C.797; 2 ♀, Paula, 30km north east of Navapur, Navapur Taluka, Nandurbar dist., Maharashtra, Coll. R.H.K., 30. 12. 1985, C.798; 1 ♀, Tapi River, Gadartura, 17km north east of Nandurbar, Nandurbar Taluka, Nandurbar dist., Maharashtra, Coll. R.H.K., 01. 01. 1986, C.796; 1 ♂, Shahada, Shahada Taluka, Nandurbar dist., Maharashtra, Coll. R.H.K., 02. 01. 1986, C.792; 2 ♂ & 2 ♀, District border of Dhule & Nashik, 55km south east of Visarwadi, Dhule dist., Maharashtra, Coll. R.M.S. & D.B.B., 17. 01. 1986, C.783; 1 ♀, 45km north of Shirpur on Boradi Malkatar Road near Navibudki Village, Dhule dist., Maharashtra, Coll. R.M.S. & D.B.B., 28. 01. 1986, C.786; 1 ♀, Kajali River, near Umbargaon, on Kolhapur-Road, Pali, Ratnagiri dist., Maharashtra, Coll. R.H.K. & Party, 23. 06. 1987, C.817; 1 ♀, Nagzari River near Sarad Village, Vani, Nashik dist., Maharashtra, Coll. M.S.P., 19. 09. 1987, C.875; 1 ♂ & 1 ♀, Pandane River near Pandane Village, on Vani-Borgaon Road, Nashik dist., Maharashtra, Coll. M.S.P., 19. 09. 1987, C.866; 1 ♀, Chinchkundi Nalla near Borpada Village, 13km west of Harsul, Nashik dist., Maharashtra, Coll. M.S.P., 11. 11. 1987, C.877; 2 ♂, Undval River on Aswali Darna Dam, Vani, Nashik dist., Maharashtra, Coll. M.S.P., 17. 11. 1987, C.858; 1 ♂ & 1 ♀, Bedi River, near Athambe Village, Vani, Nashik dist., Maharashtra, Coll. M.S.P., 20. 11. 1987, C.876; 2 ♂ & 1 ♀, Nalla near Raigad Fort, 50km east of Mangaon, Raigad dist., Maharashtra, Coll. D.B.B. & Party, 06. 12. 1987, C.844; 1 ♂, 50km on Nagothane-Alibag Road & around, Raigad dist., Maharashtra, Coll. D.B.B. & Party, 09. 12. 1987, C.1155; 2 ♂ & 1 ♀, Nasardi River, Trimbak Road, Nashik dist., Maharashtra, Coll. G.M.Y., 21. 02. 1988, C.856; 1 ♀, Stream on the way to Karla, 57km west of Pune, Pune dist., Maharashtra, Coll. G.M.Y., 01. 10. 1988, C.724; 1 ♂ & 1 ♀, Stream near Phonda Ghat, 12km west of Dajipur, Sindhudurg dist., Maharashtra, Coll. M.S.P., 18. 02. 1989, C.915; 1 ♂, Nalla near Malwadi, Village on Mahabaleshwar-Satara Road, Satara dist., Maharashtra, Coll. P.P.K. & Party, 09. 05. 1989, C.777; 2 ♂, Nagu River near Mosale, Bandipur N.P., Chamarajanagar dist., Karnataka, Coll. G.M.Y., 24. 09. 1989, C.604; 1 ♂, Laxman tirth near Kuttta, Nagarhole N.P., Kodagu dist., Karnataka, Coll. M.S.P., 02. 10. 1989, C.578; 1 ♀, Nagarhole River, 9km from Rest House, Nagarhole N.P., Kodagu dist., Karnataka, Coll. S.V.M.,

21. 12. 1989, C.608; 2♂ & 1♀, Saha Village, Ujani Wetland, Pune dist., Maharashtra, Coll. S.G.P. & Party, 05. 01. 1990, C.701; 1♂ & 1♀, Mand Nalla, 10km from Khandala, near Shirval, Khandala Taluka, Satara dist., Maharashtra, Coll. R.M.S. & Party, 08. 03. 1990, C.816; 1♂, Stream 4km away from Wai, Wai Taluka, Satara dist., Maharashtra, Coll. R.M.S. & Party, 09. 03. 1990, C.815; 2♀, Sarad Nalla near Koparde Village, Khandala Taluka, Satara dist., Maharashtra, Coll. R.M.S. & Party, 14. 03. 1990, C.789; 1♀, Under Bridge, Krishna River near Bhujinj Village, Wai Taluka, Satara dist., Maharashtra, Coll. R.M.S. & Party, 15. 03. 1990, C.805; 3♂ & 1♀, Laxman tirth River, Nagarhole N.P., Kodagu dist., Karnataka, Coll. S.G.P. & Party, 19. 09. 1990, C.593; 2♂, Dodambi stream, Nagarhole Balele Road, Nagarhole N.P., Kodagu dist., Karnataka, Coll. S.G.P. & Party, 22. 09. 1990, C.607; 2♀, Nagarhole stream near Bridge, Nagarhole N.P., Kodagu dist., Karnataka, Coll. S.G.P. & Party, 23. 09. 1990, C.638; 1♀, Gagargiri Nalla near Navada Village, Kharepatan, Sindhudurg dist., Maharashtra, Coll. P.P.K., 02. 12. 1990, C.885; 1♀, Malur River, Malur Village, Chura Kund Range, Melghat T.P., Amravati dist., Maharashtra, Coll. D.F.S., 12. 02. 1991, C.484; 1♀, Turma River, Bodkheda, Dhakna range, Melghat T.R., Amravati dist., Maharashtra, Coll. D.F.S., 16. 02. 1991, C.595; 1♂, Darna River, Sansari Phata, Deolali, Nashik dist., Maharashtra, Coll. B.E.Y., 23. 03. 1991, C.842; 3♂ & 2♀, Kumbhave Village near Dapoli, Ratnagiri dist., Maharashtra, Coll. S.V.M., 07. 04. 1991, C.870; 1♂, Nivali Village near Ganapatipule, Ratnagiri dist., Maharashtra, Coll. S.V.M., 11. 04. 1991, C.850; 1♀, Kondar, Ujani Wetland, Pune dist., Maharashtra, Coll. S.V.M., 24. 06. 1991, C.705; 11♂ & 3♀, Kali River, near Erde Village, Uttar Kannada dist., Karnataka, Coll. P.P.K. & Party, 09. 02. 1992, C.446; 3♂ & 3♀, Payaswini River near Sullia (=Sulya), Sullia Taluka, Dakshina Kannada dist., Karnataka, Coll. P.P.K. & Party, 10. 02. 1992, C.601; 1♂, Kupett River, Belthangady Taluka, Dakshina Kannada dist., Karnataka, Coll. P.P.K. & Party, 11. 02. 1992, C.461; 1♂, Nalla near Bambila, Bantwal Taluka, Dakshina Kannada dist., Karnataka, Coll. P.P.K. & Party, 14. 02. 1992, C.460; 1♀, Kujadi River on Karkala Belthangady Road, Udupi dist., Karnataka, Coll. P.P.K. & Party, 17. 02. 1992, C.452; 1♀, Kujadi River on Karkala Belthangady Road, Udupi dist., Karnataka, Coll. P.P.K. & Party, 17. 02. 1992, C.453; 3♀, Bombar Bett, 21km from Karkala, Udupi dist., Karnataka, Coll. P.P.K. & Party, 18. 02. 1992, C.459; 2♂ & 2♀, Dolar River & around in Core Zone, Dhakna, Melghat T.R., Amravati dist., Maharashtra, Coll. M.S.P., 18. 02. 1992, C.503; 2♂ & 2♀, Lake in Khandala, Pune dist., Maharashtra, Coll. M.S.P., 02. 07. 1992, C.695; 10♂, Gobi nalla near Bori Village, Dhakna Range, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K., 05. 12. 1992, C.588; 1♂, Gullarghat Khatkali Road, Dhakna range, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K., 07. 12. 1992, C.627; 2♂, Dedra Khora, Koktu, Dhakna Range, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K., 08. 12. 1992, C.590; 1♂, Gugamal, Gunjala nalla, Koktu range, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K., 09. 12. 1992, C.649; 4♀, Chadder pati, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 14. 02. 1993, C.583; 1♂ & 1♀, Cipidoh, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 18. 02. 1993, C.501; 1♀, Matideo Nalla,

Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 19. 02. 1993, C.569; 1 ♀, Khandala (Western Ghat), Pune dist., Maharashtra, Coll. M.S.P., 14. 01. 1994, C.711; 1 ♀, Stream near Rajmachi Point, Khandala, Pune dist., Maharashtra, Coll. M.S.P., 16. 01. 1994, C.756; 1 ♂, Gurgipati, Koktu, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P., 27. 03. 1994, C.596; 5 ♂ & 6 ♀, Koktu River near Koktu Rest House, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 30. 03. 1994, C.587; 2 ♂ & 1 ♀, Kovla Nalla, near Raipur Village, Melghat T.P., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 01. 04. 1994, C.492; 1 ♀, Jawahar Kund near Semadoh, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 02. 04. 1994, C.636; 4 ♂ & 1 ♀, Chaddu Pati, near Semadoh, Melghat T.P., Amravati dist., Maharashtra, Coll. M.S.P. & Party, 04. 04. 1994, C.487; 8 ♂ & 9 ♀, Belkund Doh, Akot Road, Melghat T.R., Amravati dist., Maharashtra, Coll. M.S.P. & Party, 05. 04. 1994, C.618; 1 ♂ & 3 ♀, Bandar Koi near Chikhaldara, Melghat T.P., Amravati dist., Maharashtra, Coll. M.S.P., 06. 04. 1994, C.485; 1 ♂, Chol Nalla, 4km N. of Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. G.M.Y., 09. 08. 1994, C.378; 1 ♂, Phephrikund, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P. & Party, 25. 09. 1994, C.620; 1 ♂ & 1 ♀, Gawalighat, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P. & Party, 26. 09. 1994, C.623; 1 ♀, Chikhhal Khari nalla, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P. & Party, 27. 09. 1994, C.644; 1 ♂ & 1 ♀, Compartment No. 537, Ranidoh, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P. & Party, 01. 10. 1994, C.615; 1 ♂, Kuwapati Chaddu Pada & around, Melghat T.R., Amravati dist., Maharashtra, Coll. S.S.K., 17. 11. 1994, C.658; 1 ♂, Ambadoh on Chikha-Sema Road, Melghat T.R., Amravati dist., Maharashtra, Coll. S.S.K., 21. 11. 1994, C.655; 5 ♂, Bhopala nalla & around, Melghat T.R., Amravati dist., Maharashtra, Coll. S.S.K., 22. 11. 1994, C.657; 1 ♀, Bhumka baba, Melghat T.R., Amravati dist., Maharashtra, Coll. S.S.K., 23. 11. 1994, C.570; 3 ♀, Kalapani Village Area, Melghat T.P., Amravati dist., Maharashtra, Coll. S.S.K., 26. 11. 1994, C.506; 2 ♀, Khapra River near Ghokd Village, Melghat T.R., Amravati dist., Maharashtra, Coll. S.S.K., 30. 11. 1994, C.619; 1 ♀, Bodhal Jira, Pench N.P., Nagpur dist., Maharashtra, Coll. P.P.K. & Party, 03. 12. 1994, C.641; 1 ♀, Ambakhori, Pench N.P., Nagpur dist., Maharashtra, Coll. P.P.K. & Party, 04. 12. 1994, C.632; 11 ♂ & 1 ♀, Makadi Nalla, Dhargad, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K. & Party, 04. 12. 1994, C.576; 1 ♂, Dongargaon, Dongardeo, Pench N.P., Nagpur dist., Maharashtra, Coll. P.P.K. & Party, 05. 12. 1994, C.654; 1 ♂, Gawalighat, Pench N.P., Nagpur dist., Maharashtra, Coll. P.P.K. & Party, 08. 12. 1994, C.630; 2 ♂, Kala Amba, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.H.K., 01. 03. 1995, C.527; 3 ♂ & 1 ♀, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K., 18. 09. 1995, C.591; 1 ♂ & 1 ♀, Ghatpendhari & around, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K., 25. 09. 1995, C.634; 1 ♀, Dongardeo in West Ghat Pendhari, Pench N.P., Nagpur dist., Maharashtra, Coll. R.M.S. & Party, 03. 12. 1995, C.612; 1 ♂, Gawalighat & around, Pench N.P., Nagpur dist., Maharashtra, Coll. R.M.S. & Party, 11. 12. 1995, C.646; 1 ♀, Near Kanheri Caves, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. S.G.P. & Party, 28. 12. 1995, C.560; 2 ♂, Tulsi lake & around, Sanjay Gandhi

N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. S.G.P. & Party, 30. 12. 1995, C.546; 1 ♀, Tulsi lake & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. S.G.P. & Party, 30. 12. 1995, C.556; 1 ♀, Panchdhara Nalla & around, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. P.P.K. & Party, 29. 03. 1996, C.536; 1 ♀, Vikas Bandhara & around, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. P.P.K. & Party, 30. 03. 1996, C.539; 1 ♂ & 1 ♀, Katezari, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. P.P.K. & Party, 31. 03. 1996, C.509; 1 ♂ & 1 ♀, Dhiksal & around, Ujani Wetland, Pune dist., Maharashtra, Coll. S.S.K., 02. 07. 1996, C.739; 2 ♂, Salona, Masundi & around, Melghat T.P., Amravati dist., Maharashtra, Coll. D.B.B., 20. 09. 1996, C.488; 1 ♂ & 1 ♀, Chikhaldara & around, Melghat T.R., Amravati dist., Maharashtra, Coll. D.B.B., 22. 09. 1996, C.602; 1 ♂ & 2 ♀, Ambakhori, Pench N.P., Nagpur dist., Maharashtra, Coll. A.S.M. & Party, 05. 10. 1996, C.650; 5 ♂, Dakshin Bodal, Zira, Pench N.P., Nagpur dist., Maharashtra, Coll. A.S.M. & Party, 05. 10. 1996, C.589; 1 ♂, Phephrikund & around, Pench N.P., Nagpur dist., Maharashtra, Coll. A.S.M. & Party, 06. 10. 1996, C.1167; 2 ♂, Phephrikund & around, Pench N.P., Nagpur dist., Maharashtra, Coll. A.S.M. & Party, 06. 10. 1996, C.653; 1 ♀, Ghoghara nalla near Sillari, Pench N.P., Nagpur dist., Maharashtra, Coll. A.S.M. & Party, 09. 10. 1996, C.625; 1 ♂ & 1 ♀, Vasant Bandhara, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 05. 12. 1996, C.540; 2 ♂, Katung Bamboo, Pili area, Melghat T.R., Amravati dist., Maharashtra, Coll. A.S.M. & Party, 19. 02. 1997, C.497; 1 ♂, Chamhar Udhda Height & around, Melghat T.P., Amravati dist., Maharashtra, Coll. A.S.M., 20. 02. 1997, C.495; 1 ♀, Gadga River, 6km from Dhakna on Dharni Road, Melghat T.R., Amravati dist., Maharashtra, Coll. A.S.M. & Party, 28. 02. 1997, C.585; 2 ♂ & 2 ♀, Lakhephal, Nathsagar Wetland, Aurangabad dist., Maharashtra, Coll. R.M.S. & Party, 26. 09. 1997, C 369; 1 ♂, Ambathira & around, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. A.S.M. & Party, 21. 10. 1997, C.515; 1 ♀, Ramdegi & around, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. A.S.M. & Party, 22. 10. 1997, C.538; 2 ♂, Ambakhori, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K. & Party, 11. 03. 1998, C.1081; 2 ♂, Phephrikund, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K. & Party, 11. 03. 1998, C.652; 1 ♂, Ranidoh & around, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K. & Party, 12. 03. 1998, C.1078; 1 ♀, Kanar Uttar Nalla, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K. & Party, 14. 03. 1998, C.1079; 1 ♂ & 1 ♀, Sindhewadi, Nathsagar Wetland, Jaikwadi, Aurangabad dist., Maharashtra, Coll. D.B.B. & Party, 29. 07. 1998, C 371; 3 ♂ & 1 ♀, Shevta Village near backwater, Nathsagar Wetland, Jaikwadi, Aurangabad dist., Maharashtra, Coll. S.G.P. & Party, 19. 11. 1998, C 368; 1 ♂, Ramdoh, Nathsagar Wetland, Jaikwadi, Aurangabad dist., Maharashtra, Coll. S.G.P., 23. 11. 1998, C 367; 2 ♀, Dahegaon, north east of Jaikwadi Wetland, Shovgaon Taluka, Ahmednagar dist., Maharashtra, Coll. A.S.M. & Party, 23. 02. 1999, C.926; 4 ♂ & 4 ♀, Jaikwadi Wetland, Ramdoh, Newasa, Newasa Taluka, Ahmednagar dist., Maharashtra, Coll. A.S.M. & Party, 24. 02. 1999, C.880; 3 ♀, Kandrya Utar & around, Pench N.P., Nagpur dist.,

Maharashtra, Coll. M.S.P., 25. 02. 1999, C.626; 1 ♂, Kala Amba-Bhanuskhindi, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 24. 03. 1999, C.535; 1 ♂, Shivanzari, Kolsa, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 25. 03. 1999, C.525; 1 ♂, Yeldari Dam, Jintur Taluka, Parbhani dist., Maharashtra, Coll. I.M.S., 10. 08. 1999, C.473; 2 ♂ & 1 ♀, Nathsagar Wetland, Jaikwadi, Dhakephal, Paithan, Ahmednagar dist., Maharashtra, Coll. P.P.K. & Party, 09. 10. 1999, C.888; 1 ♂, Sawkheda, Gangapur Taluka, Nathsagar Wetland, Jaikwadi, Aurangabad dist., Maharashtra, Coll. P.P.K. & Party, 12. 10. 1999, C 370; 2 ♂, Khatoda Gate to Karva Gali & around, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. P.P.K. & Party, 12. 04. 2000, C.537; 1 ♀, Chichghat, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. P.P.K., 14. 04. 2000, C.532; 1 ♂ & 2 ♀, Vasai Creek-Nagla (Yoor), Sanjay Gandhi N.P., Borivali, Mumbai, Thane dist., Maharashtra, Coll. R.M.S. & Party, 21. 03. 2001, C.542; 1 ♂, Tulsi lake & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. A.S.M., 17. 06. 2001, C.547; 2 ♀, Yoor, Sasu Pada, Sanjay Gandhi N.P., Borivali, Mumbai, Thane dist., Maharashtra, Coll. P.P.K. & Party, 13. 12. 2001, C.541; 1 ♀, Vilian-Bhati, Ranges Bhati, South Goa, South Goa dist., Goa, Coll. P.P.K. & Party, 25. 01. 2002, C.1158; 1 ♀, Colem River near Molem, South Goa dist., Goa, Coll. S.G.P. & Party, 26. 02. 2002, C.1146; 3 ♂ & 3 ♀, Stream near Baruse Village, South Goa dist., Goa, Coll. S.G.P. & Party, 06. 03. 2002, C.1144; 1 ♂, Lonar Crater Proper, south of Forest Rest House, Lonar, Buldhana dist., Maharashtra, Coll. D.B.B., 16. 02. 2003, C.917; 2 ♂, Girna River, Malegaon, Nashik dist., Maharashtra, Coll. G.K.P., 10. 03. 2003, C.550; 1 ♂, Pavana River, Ravet, Pune, Pune dist., Maharashtra, Coll. A.A.M., 1. 08. 2003, C.465; 1 ♀, Pavana River, Ravet, Pune, Pune dist., Maharashtra, Coll. A.A.M., 1. 08. 2003, C.472; 1 ♂, Pavana River, Ravet, Pune, Pune dist., Maharashtra, Coll. M.R.P., 27. 05. 2004, C.466; 5 ♂, Bhorgiri, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. S.G.P., 20. 11. 2004, C.398; 2 ♀, View Point, Migalato, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. S.G.P., 23. 11. 2004, C.405; 1 ♀, Kondhwa, Pune dist., Maharashtra, Coll. P.P.K., 22. 02. 2005, C.1157; 1 ♂ & 2 ♀, On the way to Bhorgiri, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. P.P.K., 24. 05. 2005, C.508; 1 ♂, Kondwal & around, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. D.B.B., 02. 08. 2005, C.392; 1 ♀, Nandura, on Talegaon Road, Wardha dist., Maharashtra, Coll. R.H.K., 11. 03. 2006, C.1153; 2 ♂ & 3 ♀, Sip Nadi, Wagnath, Yavatmal dist., Maharashtra, Coll. R.H.K., 21. 03. 2006, C.458; 1 ♀, Pathardi Taluka (Lake), Ahmednagar dist., Maharashtra, Coll. B.R.G., 28. 06. 2006, C.467; 2 ♂ & 3 ♀, Malegaon Talav, Kolhapur dist., Maharashtra, Coll. P.D.R., 05. 01. 2007, C.928; 1 ♂, Dhigara Amba & around, Compartment No. 26, Chandoli N.P., Sangli dist., Maharashtra, Coll. S.G.P. & Party, 08. 01. 2007, C 349; 1 ♂, Khandala, Pune dist., Maharashtra, Coll. M.A.M., 07. 09. 2007, C 359; 1 ♂, Khandala, Pune dist., Maharashtra, Coll. M.A.M., 07. 09. 2007, C 362; 1 ♂, Malavli, Pune dist., Maharashtra, Coll. M.R., 07. 09. 2007, C 360; 4 ♂, Malavli, Pune dist., Maharashtra, Coll. Mujieb, 07. 09. 2007, C 364; 1 ♂, Malavli, Pune dist., Maharashtra, Coll. M.R., 09. 09. 2007, C 363; 1 ♂ & 1 ♀, Gharani River, Shirur Taluka, Anantpal, Latur dist., Maharashtra, Coll. M.H.M., 29. 09. 2007,

C.562; 2♂, Zolambi, Compartment No. 21, Chandoli N.P., Sangli dist., Maharashtra, Coll. S.G.P. & Party, 07. 12. 2007, C 351; 2♂, Niwalegaon, Compartment No. 31, Chandoli N.P., Sangli dist., Maharashtra, Coll. S.G.P. & Party, 08. 12. 2007, C 343; 2♂, Sambarkund Bandhara & around, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.G.P. & Party, 11. 12. 2007, C 340; 3♂, Savarai Sada Tank & around, Compartment No. 46, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.G.P. & Party, 11. 12. 2007, C.913; 4♂, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. P.P.K. & Party, 19. 01. 2008, C 354; 1♂, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. P.P.K. & Party, 19. 01. 2008, C 355; 1♂, Waghachepani, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. P.P.K. & Party, 19. 01. 2008, C 347; 1♂, Zolambi, Waterhole, Chandoli N.P., Sangli dist., Maharashtra, Coll. P.P.K. & Party, 25. 01. 2008, C 346; 3♂, Panhalache Pani, Chandoli N.P., Sangli dist., Maharashtra, Coll. P.P.K. & Party, 27. 01. 2008, C 352; 3♂, Niwale, Chandoli N.P., Sangli dist., Maharashtra, Coll. P.P.K. & Party, 28. 01. 2008, C 348; 3♂, On the way to Bhudargarh via Radhanagari & Kalambawadi Dam, south east of Dajipur, Kolhapur dist., Maharashtra, Coll. D.B.B., 28. 02. 2008, C.920; 2♂, Amaravati River Medium Project, Malpur, Dhule dist., Maharashtra, Coll. K.A.S. & Party, 19. 10. 2008, C 365; 1♂, Kukadi River, Pune dist., Maharashtra, Coll. K.A.S., 22. 10. 2008, C 366; 2♂ & 1♀, Waghachepani, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. K.A.S., 07. 01. 2009, C.905; 1♀, Mahadev nalla, near Gagangiri Ashram, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. A.S.M. & Party, 27. 02. 2009, C.1151; 7♂ & 5♀, Sambarkund, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. A.S.M., 04. 03. 2009, C.933; 2♂, Niwale Around, Chandoli N.P., Sangli dist., Maharashtra, Coll. P.D.R. & Party, 01. 04. 2009, C 342; 2♂ & 2♀, Naniwale (Hasane) & around, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.S.T. & Party, 21. 02. 2010, C.924; 1♂, Lapan Waterhole, Chandoli N.P., Sangli dist., Maharashtra, Coll. P.S.B. & Party, 04. 03. 2010, C 344; 1♂, Waghachepani, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. P.S.B. & Party, 08. 03. 2010, C 341; 2♂ & 2♀, Kuruli, Khed, Pune dist., Maharashtra, Coll. Y.K., 11. 10. 2010, C.904; 2♂, Phansad Gan, Phansad W.L.S., Raigad dist., Maharashtra, Coll. P.S.B. & Party, 09. 01. 2011, C 358; 1♂, 5km north east of Bhimashankar, Pune dist., Maharashtra, Coll. S.K.P., 21. 01. 2011, C.672; 1♀, Chas Kaman Dam, Rajgurunagar Taluka, Pune dist., Maharashtra, Coll. S.K.P., 21. 01. 2011, C.673; 4♂, Lower bank of Savrat Talav & around, Phansad W.L.S., Raigad dist., Maharashtra, Coll. P.D.R., 17. 02. 2011, C.463; 1♂, Phansad W.L.S. to Murud Road & Around, Phansad W.L.S., Raigad dist., Maharashtra, Coll. P.D.R., 18. 02. 2011, C.462; 1 Ex., Indapur, Pune dist., Maharashtra, Coll. S.M.A.J., 07. 04. 2011, C 339; 1♀, Stream on the way to Bhusi Dam, Lonavla, Pune dist., Maharashtra, Coll. S.S.J. & Party, 16. 09. 2011, C.800; 2♂ & 2♀, Stream near Savali Village, Medha Taluka, Satara dist., Maharashtra, Coll. S.S.J. & Party, 20. 10. 2011, C.802; 1♂ & 1♀, Verna River, Satara, Satara dist., Maharashtra, Coll. S.S.J. & Party, 20. 10. 2011, C.891; 1♂, Stream 4km north east of Forest Rest House, Phansad W.L.S., Raigad dist., Maharashtra, Coll. P.S.B. &

Party, 25. 11. 2011, C.830; 1 ♂, Savrat Talab, Phansad W.L.S., Raigad dist., Maharashtra, Coll. P.S.B. & Party, 27. 11. 2011, C.835; 3 ♂ & 6 ♀, Phansad Gan, Phansad W.L.S., Raigad dist., Maharashtra, Coll. P.S.B. & Party, 29. 11. 2011, C.836; 1 ♀, Phansad Dam, Phansad W.L.S., Raigad dist., Maharashtra, Coll. P.S.B. & Party, 01. 12. 2011, C.834; 1 ♂, Stream near Narmada Park, Pradhikaran, Pune, Pune dist., Maharashtra, Coll. S.K.P., 03. 12. 2011, C.520; 1 ♀, Chikhala Gan, Phansad W.L.S., Raigad dist., Maharashtra, Coll. R.B. & Party, 05. 01. 2012, C.838; 1 ♂, Stream near Sabatacha Mal, Phansad W.L.S., Raigad dist., Maharashtra, Coll. R.B. & Party, 07. 01. 2012, C.832; 2 ♂ & 2 ♀, Phansad Gan, Phansad W.L.S., Raigad dist., Maharashtra, Coll. R.B. & Party, 08. 01. 2012, C.837; 2 ♂ & 1 ♀, Dharanachi Gan & around, Phansad W.L.S., Raigad dist., Maharashtra, Coll. R.B. & Party, 10. 01. 2012, C.833; 1 ♂, Phansad Dam, Phansad W.L.S., Raigad dist., Maharashtra, Coll. R.B. & Party, 11. 01. 2012, C.831; 1 ♂, Gangacha Gond, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.S.J. & Party, 28. 01. 2012, C.821; 1 ♂ & 1 ♀, Mahadeb Mandir, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.S.J. & Party, 28. 01. 2012, C.826; 1 ♂, Stream near Valvan, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.S.J. & Party, 28. 01. 2012, C.822; 1 ♂ & 1 ♀, Waghachepani, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.S.J. & Party, 28. 01. 2012, C.819; 3 ♂, Stream in Surangi, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.S.J. & Party, 29. 01. 2012, C.823; 1 ♂ & 1 ♀, Savrat Talab, Phansad W.L.S., Pune dist., Maharashtra, Coll. S.S.K., 15. 03. 2012, C.1135; 3 ♂, Dharanachi Gan, Phansad W.L.S., Pune dist., Maharashtra, Coll. S.S.K. & Party, 17. 03. 2012, C.1143; 1 ♂ & 1 ♀, Chikhala Gan, Phansad W.L.S., Pune dist., Maharashtra, Coll. S.S.K., 19. 03. 2012, C.1138; 3 ♀, Phansad Dam, Phansad W.L.S., Pune dist., Maharashtra, Coll. S.S.K., 20. 03. 2012, C.1139; 1 ♂, Trimbak, Nashik dist., Maharashtra, Coll. S.R.S., 09. 09. 2012, C.1088; 1 ♂, Nadi Kinara, Vannur, Kolhapur dist., Maharashtra, Coll. S.S.K., 13. 09. 2012, C.1085; 2 ♂, Gaganbawada, Kolhapur dist., Maharashtra, Coll. P.S.B. & Party, 14. 09. 2012, C.1089; 2 ♂, Manikdoh, Junnar, Pune dist., Maharashtra, Coll. S.S.J., 15. 09. 2012, C.1086; 1 ♂, Manudevi, Chopda Taluka, Jalgaon dist., Maharashtra, Coll. M.J.J., 12. 11. 2012, C.1159; 4 ♂ & 2 ♀, Phansad Gan, Phansad W.L.S., Pune dist., Maharashtra, Coll. R.B. & Party, 20. 01. 2013, C.1136; 3 ♂ & 1 ♀, Dharanachi Gan & around, Phansad W.L.S., Pune dist., Maharashtra, Coll. R.B. & Party, 21. 01. 2013, C.1141; 4 ♂ & 5 ♀, Phansad Gan & around, Phansad W.L.S., Pune dist., Maharashtra, Coll. P.S.B. & Party, 15. 02. 2013, C.1142; 1 ♂, Hele Gan, Compartment No. 677, Phansad W.L.S., Pune dist., Maharashtra, Coll. P.S.B. & Party, 18. 02. 2013, C.1140; 1 ♂, Kajuwadi & around, Bohighar, Phansad W.L.S., Pune dist., Maharashtra, Coll. P.S.B. & Party, 20. 02. 2013, C.1137 and 1 ♀, Pune, Pune dist., Maharashtra, Coll. Unknown, No Date, C.889.

*Morphometry* : Males : CW : 11.16–92.82 (32.26±18.22); CL : 9.08–68.56 (25.08±12.99); CH : 4.36–37.04 (12.59±6.94) and Females : CW : 7.6–91.84 (37.81±21.18); CL : 6.78–69.22 (29.53±15.92); CH : 4–38 (15.6±9.10).

*Description* : Carapace wider than long, slightly convex anteriorly and gradually sloped posteriorly; epigastric cristae well developed, slightly anterior to and confluent with postorbital cristae; postorbital cristae well developed, forms a gentle concave ridge in dorsal view, separated from epibranchial tooth by cervical groove; external orbital angle triangular, with outer margin 2.5 times inner margin; epibranchial tooth distinct, blunt or sometimes slightly sharp, in level with postorbital cristae; frontal median triangle incomplete with only dorsal margin; epistomal median lobe without median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod with long flagellum, longer than ischium. Chelipeds unequal; carpal spine distinct, blunt. Ambulatory legs longest propodus more than twice as long as broad. Suture between thoracic sternites 2, 3 distinct; between 3, 4 visible as shallow grooves on sides only. Male abdomen narrowly triangular; sixth male abdominal somite broader than long, nearly equal in length to telson, with concave lateral margins; telson tongue shaped; male abdominal cavity deep. G1 long, narrow, curving slightly outwards; terminal segment long (0.7 times length of subterminal segment), tip pointed. G2 short; distal segment short (0.2 times length of basal segment).

*Distribution* : India : Distributed throughout the country from Himachal Pradesh in north to Kerala in south except north-east India.

*IUCN status* : Least Concern (Cumberlidge, 2008d).

*Remarks* : *Barytelphusa jacquemontii* [= *P. (P.) jacquemontii* Rathbun, 1905] is a junior synonym of *B. cunicularis* as also opined by Bott (1970a). Some specimens from few districts (Solapur, Kolhapur, South Goa and Uttar Kannada) had sharp epibranchial tooth. Altitudinal range varied from 3 m to 1325 m.

#### 4. *Barytelphusa guerini* (H. Milne Edwards, 1853) (Fig. 4A–G)

1853. *Thelphusa guerini* H. Milne Edwards, *Ann. Sci. Nat. Zool.*, **20**(3) : 210.

1869. *Thelphusa planata* A. Milne Edwards, *Nouv. Arch. Mus. Hist. nat. Paris*, **5** : 181.

1893. *Telphusa pocockiana* Henderson, *Trans. Linn. Soc. London*, **5**(2) : 384.

1905. *Potamon (Potamonautes) planatus* Rathbun, *Nouv. Arch. Mus. Hist. nat. Paris*, (4)**7** : 186.

1910. *Paratelphusa (Barytelphusa) guerini* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, **1**(2) : 87.

1970a. *Barytelphusa (Barytelphusa) guerini* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 33.

*Type locality* : India.

*Material examined* : 2 Ex., Base of Mahar bill, Vadgaon, Pune dist., Maharashtra, Coll. K.A.K., 06. 09. 1960, A/130; 1 Ex., Sinhagad (=Sinhagarh), Pune dist., Maharashtra, Coll. S.D.K., 14. 09. 1960, A/409; 1 Ex., Kalyani, Pune dist., Maharashtra, Coll. S.N.C., 03. 08. 1962, A/408; 1 Ex., Mankhed Village, Pune dist., Maharashtra, Coll. B.K.T., 06. 08. 1962, A/

415; 1 Ex., Kondanpur, Pune dist., Maharashtra, Coll. S.N.C., 10. 08. 1962, A/414; 1 Ex., Arvi Village, Pune dist., Maharashtra, Coll. M.M.C., 27. 08. 1962, A/416; 4 ♂ & 2 ♀, Katraj Ghat, Pune, Pune dist., Maharashtra, Coll. R.N.C., 25. 09. 1963, C.1031; 4 Ex., Karla, Pune dist., Maharashtra, Coll. B.K.T., 05. 11. 1963, A/399; 1 Ex., Khandala, Pune dist., Maharashtra, Coll. B.K.T., 14. 11. 1963, A/407; 5 ♂ & 1 ♀, Paithan (Station No. 22), Aurangabad dist., Maharashtra, Coll. Unknown, 27. 09. 1964, C.1009; 4 ♂ & 3 ♀, Pimpalwadi on Paithan-Aurangabad Road, Aurangabad dist., Maharashtra, Coll. R.N.C., 27. 09. 1964, C.1055; 4 ♂ & 6 ♀, Mahali-Masjid, Paithan, Aurangabad dist., Maharashtra, Coll. R.N.C., 28. 09. 1964, C.1037; 4 ♂ & 3 ♀, Pimpalwadi, Paithan-Aurangabad, Aurangabad dist., Maharashtra, Coll. R.N.C., 29. 09. 1964, C.1080; 1 ♂, Yerna Rivulet, South of Strawberry Garden, Mahabaleshwar, Satara dist., Maharashtra, Coll. B.S.L., 15. 02. 1965, C.1036; 1 ♂ & 1 ♀, Behind P.W.D. Bungalow, Paud, Pune dist., Maharashtra, Coll. B.S.L., 29. 06. 1965, C.997; 10 ♂ & 25 ♀, Vadgaon, Pune dist., Maharashtra, Coll. B.S.L., 19. 08. 1966, C.984; 2 ♂, Vadgaon, Pune dist., Maharashtra, Coll. B.S.L., 09. 09. 1966, C.960; 1 ♀, Khed Shivapur, Pune dist., Maharashtra, Coll. R.N.C., 12. 09. 1968, C.957; 3 Ex., Lonavla, Pune dist., Maharashtra, Coll. B.K.T., 13. 11. 1968, A/413; 1 ♂, Godavari River Basin Survey, Sultangad, Aurangabad dist., Maharashtra, Coll. B.S.L., 19. 12. 1968, C.882; 1 ♂, Daulatabad, Aurangabad dist., Maharashtra, Coll. B.S.L., 20. 12. 1968, C.1056; 1 ♂ & 2 ♀, Sultangad, Aurangabad dist., Maharashtra, Coll. Unknown, 21. 12. 1968, C.410; 4 ♂ & 1 ♀, Shindewadi, Pune dist., Maharashtra, Coll. R.N.C., 14. 09. 1969, C.973; 1 ♂, Pirangut, Pune, Pune dist., Maharashtra, Coll. B.S.L., 06. 11. 1969, C.1045; 49 ♂ & 26 ♀, Kamshet, Pune dist., Maharashtra, Coll. R.N.C., 23. 07. 1970, C.706; 1 ♂ & 1 ♀, Paud, Pune dist., Maharashtra, Coll. K.R.R., 06. 08. 1970, C.1021; 26 ♂ & 30 ♀, Kamshet, Pune dist., Maharashtra, Coll. R.N.C., 13. 08. 1970, C.707; 9 ♂ & 9 ♀, Kamshet, Pune dist., Maharashtra, Coll. R.N.C., 03. 09. 1970, C.709; 1 ♀, Naigaon, Nanded dist., Maharashtra, Coll. R.N.C., 01. 12. 1970, C.436; 1 ♂, Kondhapuri, Pune dist., Maharashtra, Coll. B.S.L., 29. 07. 1971, C.717; 2 ♂ & 5 ♀, Nalla at Kabarali Village, Nanded dist., Maharashtra, Coll. K.R.R., 16. 08. 1971, C.1003; 1 ♂, Nalla at Naigaon, Nanded dist., Maharashtra, Coll. K.R.R., 19. 08. 1971, C.1053; 1 ♀, Kondhapuri, Pune dist., Maharashtra, Coll. B.S.L., 02. 12. 1971, C.730; 3 ♂ & 2 ♀, Rajbaug, Pune dist., Maharashtra, Coll. B.S.L., 18. 12. 1971, C.753; 1 ♀, Gaon Tank at Dimas, 19km south west of Surat, Surat dist., Gujarat, Coll. G.M.Y., 09. 11. 1972, C.1067; 1 ♂, Surwari Talav, Near Bunla of Narmada, 1km north of Ankleshwar, Bharuch dist., Gujarat, Coll. G.M.Y., 18. 11. 1972, C.965; 1 ♀, Bedsa Village, Pune dist., Maharashtra, Coll. P.D.G., 09. 08. 1973, C.979; 4 ♂ & 5 ♀, Kamshet Village, Pune dist., Maharashtra, Coll. P.D.G., 09. 08. 1973, C.969; 1 ♀, Pawana Dam, Pune dist., Maharashtra, Coll. P.D.G., 09. 08. 1973, C.949; 1 ♂, Bhawad Ghat, 10km south of Deola, Nashik dist., Maharashtra, Coll. M.B.R., 28. 09. 1973, C.423; 3 ♂ & 3 ♀, Vanitha River, near Agra-Bombay Road, Nashik dist., Maharashtra, Coll. M.B.R., 28. 09. 1973, C.418; 4 ♂ & 4 ♀, Nalla at Mangrul, Nashik dist., Maharashtra, Coll. M.B.R., 29. 09. 1973, C.421; 2 ♂ & 1 ♀, Rahod River, Nashik dist., Maharashtra, Coll. M.B.R., 29. 09. 1973, C.387; 2 ♂ & 2 ♀,

Dharangaon, Niphad Taluka, Nashik dist., Maharashtra, Coll. M.B.R., 02. 10. 1973, C.426; 3 ♂ & 3 ♀, Banganga Stream, 3km east Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 16. 10. 1973, C.853; 6 ♂ & 7 ♀, Pundi Nalla, 8km east of Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 17. 10. 1973, C.415; 1 ♂, Stream near Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 20. 10. 1973, C.860; 2 ♂ & 6 ♀, Sinhad, Pune dist., Maharashtra, Coll. B.K.T., 18. 09. 1974, C.892; 2 ♂ & 2 ♀, Paud, Pune dist., Maharashtra, Coll. M.B.R. & Party, 16. 07. 1975, C.746; 1 ♀, Perennial Pond near Hadapsar, Pune dist., Maharashtra, Coll. B.K.T., 02. 08. 1975, C.749; 1 ♀, Donje Village, Pune dist., Maharashtra, Coll. D.B.B. & Party, 19. 06. 1976, C.710; 2 ♂ & 1 ♀, Karla, Pune dist., Maharashtra, Coll. B.K.T., 27. 08. 1976, C.765; 1 ♀, Karla Canal (near Indrayani River), Maval Taluka, Pune dist., Maharashtra, Coll. M.B.R., 18. 09. 1976, C.764; 1 ♂, Paud, Pune dist., Maharashtra, Coll. R.H.K., 07. 10. 1978, C.716; 3 ♂ & 1 ♀, Mulshi Village, Pune dist., Maharashtra, Coll. M.S.P., 23. 10. 1978, C.743; 1 ♂ & 1 ♀, Ankali Village, near Pandharpur, Solapur dist., Maharashtra, Coll. A.S.M., 16. 11. 1978, C.780; 1 ♂, Pathurd Lake, Barchi, Solapur dist., Maharashtra, Coll. A.S.M., 27. 11. 1978, C.773; 2 ♂ & 3 ♀, Pangaon, Barshi, Solapur dist., Maharashtra, Coll. A.S.M., 28. 11. 1978, C.790; 1 ♂, Pathardi Lake?, Latur Road, Solapur? dist., Maharashtra, Coll. A.S.M., 29. 11. 1978, C.475; 1 ♂ & 1 ♀, Hartale Tank, Edalabad, Jalgaon dist., Maharashtra, Coll. R.H.K., 05. 02. 1979, C.806; 8 ♂ & 2 ♀, Bodwad Tank, Bodwad, Jalgaon dist., Maharashtra, Coll. R.H.K., 08. 02. 1979, C.769; 4 ♂ & 2 ♀, Lahasar Nalla, Jamner, Jalgaon dist., Maharashtra, Coll. R.H.K., 12. 02. 1979, C.898; 9 ♂ & 5 ♀, Kamshet, Pune dist., Maharashtra, Coll. Ramkrishna, 03. 08. 1979, C.894; 3 ♂ & 2 ♀, Khandala Ghat, Pune dist., Maharashtra, Coll. Ramkrishna, 03. 08. 1979, C.691; 4 ♂, Yerala River, Ambegaon, Vita-Sangli, Sangli dist., Maharashtra, Coll. A.S.M., 17. 09. 1979, C.911; 2 ♂ & 2 ♀, Sinhad, Pune dist., Maharashtra, Coll. K.M., 29. 10. 1979, C.694; 1 ♂ & 5 ♀, Pawana Dam near Kamshet, Pune dist., Maharashtra, Coll. D.B.B., 19. 08. 1980, C.721; 1 ♂, Purandar, Pune dist., Maharashtra, Coll. M.S.P., 04. 09. 1981, C.727; 1 ♂ & 1 ♀, Birwadi Village, near Dasgaon, Mahad, Raigad dist., Maharashtra, Coll. M.S.P., 17. 09. 1981, C.869; 1 ♂ & 2 ♀, Stream near Lodavali, Mahad, Raigad dist., Maharashtra, Coll. M.S.P., 19. 09. 1981, C.846; 1 ♂, Mophare Village, Mahad, Raigad dist., Maharashtra, Coll. M.S.P., 20. 09. 1981, C.841; 1 ♀, Aarekhurd on Murud Road, Roha, Raigad dist., Maharashtra, Coll. M.S.P., 22. 09. 1981, C.864; 2 ♂ & 5 ♀, Poynad Village, Alibag, Raigad dist., Maharashtra, Coll. M.S.P., 26. 09. 1981, C.873; 1 ♂, Kadav Village, Karjat, Raigad dist., Maharashtra, Coll. M.S.P., 03. 10. 1981, C.483; 2 ♂, Nevade Village & around, Karjat, Raigad dist., Maharashtra, Coll. M.S.P., 05. 10. 1981, C.478; 1 ♀, Pawana River near Pawana Dam & around, Pune dist., Maharashtra, Coll. D.B.B., 04. 08. 1983, C.703; 4 ♀, Pipalkhed maruti, Parola, Jalgaon dist., Maharashtra, Coll. R.H.K., 02. 12. 1983, C.787; 2 ♂ & 3 ♀, Nigadi, 10km north of Jat, on Jat Sangola Road, Sangli dist., Maharashtra, Coll. A.S.M. & Party, 20. 09. 1984, C.878; 1 ♀, District border of Dhule & Nashik, 55km south east of Visarwadi, Dhule dist., Maharashtra, Coll. R.M.S. & D.B.B., 17. 01. 1986, C.784; 2 ♂ & 2 ♀, 60km north of Pundra on Ajra Road, Kolhapur dist., Maharashtra,

Coll. D.B.B., 28. 09. 1986, C.918; 2♂ & 1♀, Kharbat, Stone of 13km from Roha, Raigad dist., Maharashtra, Coll. A.S.M. & Party, 26. 07. 1987, C.847; 1♀, 5km south of Dajipur Rest House & around, Sindhudurg dist., Maharashtra, Coll. D.B.B. & Party, 12. 09. 1987, C.908; 1♀, Nagzari River near Sarad Village, Vani, Nashik dist., Maharashtra, Coll. M.S.P., 19. 09. 1987, C.874; 1♂, Pandane River near Pandane Village, on Vani-Borgaon Road, Nashik dist., Maharashtra, Coll. M.S.P., 19. 09. 1987, C.865; 1♂ & 2♀, 35km north east of Amboli & around, Sindhudurg dist., Maharashtra, Coll. D.B.B. & Party, 20. 09. 1987, C.922; 3♂ & 3♀, Nalla near Shirdhom, Pen, Kaud, Raigad dist., Maharashtra, Coll. A.S.M., 24. 09. 1987, C.840; 1♂, Ambenal Ghat & around, 75km south of Mangaon, on Poladpur-Mahabaleshwar Road, Raigad dist., Maharashtra, Coll. D.B.B. & Party, 07. 12. 1987, C.848; 1♂ & 1♀, Dagadachi Khan, Bhanashivra, Newasa, Newasa Taluka, Ahmednagar dist., Maharashtra, Coll. R.H.K. & Party, 04. 09. 1988, C.893; 1♀, Nagzira at Khadkale Village, Newasa, Newasa Taluka, Ahmednagar dist., Maharashtra, Coll. R.H.K. & Party, 05. 09. 1988, C.881; 1♀, Around Rest House at Shrigonda, Ahmednagar dist., Maharashtra, Coll. R.H.K. & Party, 10. 09. 1988, C.884; 3♀, Gavandhara Village, 10km north of Dharur, Beed dist., Maharashtra, Coll. R.M.S., 06. 10. 1988, C.942; 1♂, Bansiwadi, 23km south of Telgaon on Dharur Road, Beed dist., Maharashtra, Coll. R.M.S., 09. 10. 1988, C.940; 1♂ & 3♀, Karulghat near Gaganbawada Village, Kolhapur dist., Maharashtra, Coll. S.G.P. & Party, 08. 08. 1989, C.937; 2♀, Indrayani River near Kamshet, Pune dist., Maharashtra, Coll. B.E.Y., 01. 09. 1989, C.748; 7♂ & 3♀, Dam site on Erdha River, Kopare Village, Pathardi Taluka, Ahmednagar dist., Maharashtra, Coll. R.M.S., 03. 07. 1991, C.490; 1♂ & 1♀, Bitkaripani, Pipal Padav, Semadoh, Melghat T.R., Amravati dist., Maharashtra, Coll. M.S.P. & Party, 05. 02. 1992, C.504; 1♂ & 1♀, Gullarghat Khatkali Road, Dhakna range, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K., 07. 12. 1992, C.628; 1♂, Gugamal, Gunjala nalla, Koktu range, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K., 09. 12. 1992, C.648; 1 Ex., Khapra River, Chopan Village, Chaurakund, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K., 12. 12. 1992, C.580; 1♀, Khandukheda, 26km from Semadoh, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 10. 02. 1993, C.581; 3♂, Chadder pati, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 14. 02. 1993, C.582; 1♂ & 1♀, Talai, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 15. 02. 1993, C.507; 1♂ & 1♀, Cipidoh, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 18. 02. 1993, C.500; 1♂, Matideo Nalla, Melghat T.R., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 19. 02. 1993, C.568; 2♂ & 1♀, Pirkheda, Dhakna range, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K. & Party, 22. 08. 1993, C.600; 5♂ & 3♀, Chikalpati, Dhakna range, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K. & Party, 23. 08. 1993, C.647; 4♂ & 4♀, Village Chopan Road, Chaurakund, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K. & Party, 26. 08. 1993, C.499; 10♂ & 9♀, Chaurakund, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K. & Party, 28. 08. 1993, C.571; 7♂ & 7♀, 5kms Hatru-Raipur Road, Melghat T.R., Amravati dist.,

Maharashtra, Coll. P.P.K. & Party, 30. 08. 1993, C.502; 6♂ & 5♀, Hatru-Marita Road, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K. & Party, 31. 08. 1993, C.599; 1♀, Kuwapati, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K. & Party, 06. 09. 1993, C.586; 1♀, Rajapur Village, Dimbhe, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. P.P.K., 08. 11. 1993, C.397; 1♂, Bhorgiri & around, 7km south east of Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. P.P.K., 09. 11. 1993, C.394; 1♂, Kovla Nalla, near Raipur Village, Melghat T.P., Amravati dist., Maharashtra, Coll. S.G.P. & Party, 01. 04. 1994, C.491; 1♀, Bandar Koi near Chikhaldara, Melghat T.P., Amravati dist., Maharashtra, Coll. M.S.P., 06. 04. 1994, C.486; 2♂ & 3♀, Chol Nalla, 4km N. of Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. G.M.Y., 09. 08. 1994, C.379; 1♂, Bhaka Devi, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. G.M.Y., 12. 08. 1994, C.386; 1♂, Bhaka Devi, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. G.M.Y., 12. 08. 1994, C.1106; 1♀, Bhaka Devi, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. G.M.Y., 12. 08. 1994, C.448; 2♂ & 1♀, Phephrikund, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P. & Party, 25. 09. 1994, C.621; 5♂ & 2♀, Gawalighat, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P. & Party, 26. 09. 1994, C.622; 1♂ & 1♀, Chikhal Khari nalla, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P. & Party, 27. 09. 1994, C.643; 2♂ & 4♀, Backwaters of Telia Dam, Near Mahurli, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 28. 09. 1994, C.510; 1♂ & 1♀, Katezari-Wagnala, 8km west of Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 29. 09. 1994, C.511; 4♂ & 1♀, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P., 29. 09. 1994, C.642; 1♂, Khtoda-Palasaon Road, 11km south west of Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 30. 09. 1994, C.512; 2♀, Stream on Palasaon-Karwa Road, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 04. 10. 1994, C.526; 1♂, Pandharpani stream, Tadoba-Mahurli Road, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 05. 10. 1994, C.513; 2♂, Near Karla Caves, 57km west of Pune, Pune dist., Maharashtra, Coll. B.E.Y., 18. 10. 1994, C.735; 1♂ & 2♀, Khandu Kheda & rivers, Melghat T.R., Amravati dist., Maharashtra, Coll. S.S.K., 20. 11. 1994, C.617; 5♂ & 3♀, Ambadoh on Chikha-Sema Road, Melghat T.R., Amravati dist., Maharashtra, Coll. S.S.K., 21. 11. 1994, C.656; 1♂, Kalapani Village Area, Melghat T.P., Amravati dist., Maharashtra, Coll. S.S.K., 26. 11. 1994, C.505; 1♀, Dolar River near Dolar Village, Melghat T.R., Amravati dist., Maharashtra, Coll. S.S.K., 27. 11. 1994, C.637; 1♂, Phephrikund nalla, Pench N.P., Nagpur dist., Maharashtra, Coll. P.P.K. & Party, 02. 12. 1994, C.640; 2♂, Makadi Nalla, Dhargad, Melghat T.R., Amravati dist., Maharashtra, Coll. P.P.K. & Party, 04. 12. 1994, C.577; 1♀, Gawalighat, Pench N.P., Nagpur dist., Maharashtra, Coll. P.P.K. & Party, 08. 12. 1994, C.629; 1♂ & 1♀, Paulzodi, Pench N.P., Nagpur dist., Maharashtra, Coll. P.P.K. & Party, 10. 12. 1994, C.624; 1♂, Damodar nalla, Pench N.P., Nagpur dist., Maharashtra, Coll. P.P.K. & Party, 11. 12. 1994, C.645; 2♂, Basant Bandhara Road, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. S.G.P., 11. 08. 1995, C.530; 3♂ & 6♀, Katezari, Tadoba N.P., Chandrapur

dist., Maharashtra, Coll. S.G.P., 12. 08. 1995, C.529; 2 ♂, Telia nala, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. S.G.P., 13. 08. 1995, C.531; 2 ♂, Pandhar Pavani, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. S.G.P., 14. 08. 1995, C.528; 3 ♀, Ambawari, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. S.G.P., 19. 08. 1995, C.519; 4 ♂ & 5 ♀, Kanheri Caves & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. R.H.K., 19. 08. 1995, C.543; 2 ♂ & 2 ♀, Lion Safari & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. R.H.K. & Party, 20. 08. 1995, C.555; 1 ♂ & 1 ♀, Around Film City Campus, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. R.H.K. & Party, 21. 08. 1995, C.557; 1 ♀, Kolsa, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. S.G.P., 22. 08. 1995, C.517; 2 ♂, Kattigota & around, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K., 17. 09. 1995, C.609; 1 ♀, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K., 18. 09. 1995, C.592; 1 ♂ & 2 ♀, Mortalli nalla, Compartment No. 517, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K., 19. 09. 1995, C.594; 1 ♂ & 1 ♀, Phephrikund, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K., 20. 09. 1995, C.605; 1 ♀, Mungazajadi Mullah, Pench N.P., Nagpur dist., Maharashtra, Coll. R.H.K., 22. 09. 1995, C.631; 2 ♂ & 1 ♀, Kanheri Caves, Sanjay Gandhi N.P., Borivali, Mumbai, Thane dist., Maharashtra, Coll. P.P.K., 10. 10. 1995, C.879; 1 ♀, Jambhul Mal Highest Peak, Sanjay Gandhi Nation Park, Mumbai Suburban dist., Maharashtra, Coll. P.P.K. & Party, 11. 10. 1995, C.935; 1 ♂ & 1 ♀, Silonda, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. P.P.K. & Party, 13. 10. 1995, C.549; 1 ♂, Dongardeo in West Ghat Pendhari, Pench N.P., Nagpur dist., Maharashtra, Coll. R.M.S. & Party, 03. 12. 1995, C.613; 1 ♀, Tulsi lake & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. S.G.P. & Party, 30. 12. 1995, C.545; 3 ♂ & 1 ♀, Jawahar Kund & around, near Semadoh, Melghat T.R., Amravati dist., Maharashtra, Coll. D.B.B., 11. 09. 1996, C.597; 5 ♂ & 5 ♀, 30km east of Semadoh on Paratwada Road, Melghat T.R., Amravati dist., Maharashtra, Coll. D.B.B., 12. 09. 1996, C.633; 1 Ex., Vairat & around, Melghat T.P., Amravati dist., Maharashtra, Coll. D.B.B., 19. 09. 1996, C.498; 3 ♂ & 2 ♀, Salona, Masundi & around, Melghat T.P., Amravati dist., Maharashtra, Coll. D.B.B., 20. 09. 1996, C.489; 2 ♂ & 2 ♀, Chikhaldara & around, Melghat T.R., Amravati dist., Maharashtra, Coll. D.B.B., 22. 09. 1996, C.603; 1 ♀, Ambakhori, Pench N.P., Nagpur dist., Maharashtra, Coll. A.S.M. & Party, 05. 10. 1996, C.651; 2 ♂, Bakhari Talav & around, Pench N.P., Nagpur dist., Maharashtra, Coll. A.S.M. & Party, 06. 10. 1996, C.616; 1 ♂, Krishnagiri & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. R.M.S. & Party, 11. 10. 1996, C.561; 1 ♀, Chamhar Udhda Height & around, Melghat T.P., Amravati dist., Maharashtra, Coll. A.S.M., 20. 02. 1997, C.496; 1 ♀, Kanheri Caves & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. D.B.B., 26. 02. 1997, C.552; 7 ♂ & 3 ♀, Katezari & around, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. A.S.M. & Party, 19. 10. 1997, C.516; 2 ♂ & 6 ♀, Ambathira & around, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. A.S.M. & Party, 21. 10. 1997, C.514; 1 ♀, Katezari &

around, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. P.P.K. & Party, 13. 09. 1998, C.518; 2 ♀, Hatti gota & around, Pench N.P., Nagpur dist., Maharashtra, Coll. M.S.P., 28. 02. 1999, C.659; 14 ♂ & 10 ♀, Cundagaon, Near Vihar Lake, Sanjay Gandhi N.P., Borivali, Mumbai Suburban dist., Maharashtra, Coll. P.D.R., 24. 08. 2000, C.443; 1 ♂, Sasupada Nature Trail, Yewar range, Sanjay Gandhi N.P., Thane dist., Maharashtra, Coll. R.M.S. & Party, 27. 04. 2001, C.614; 7 ♂ & 1 ♀, Tulsi lake & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. A.S.M., 17. 06. 2001, C.548; 1 ♀, Kanheri Caves, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. A.S.M., 18. 06. 2001, C.553; 1 ♂, Vasai & around, Thane dist., Maharashtra, Coll. A.S.M., 19. 06. 2001, C.554; 4 ♀, Hattigate, Goregaon (East), Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. A.S.M., 20. 06. 2001, C.544; 1 ♂, Tulsi lake & around, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. R.M.S. & Party, 26. 09. 2001, C.551; 1 ♂, Hattigate, Goregaon, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. R.M.S. & Party, 28. 09. 2001, C.559; 1 ♂, Tourism Zone, Sanjay Gandhi N.P., Borivali, Mumbai, Mumbai Suburban dist., Maharashtra, Coll. R.M.S. & Party, 01. 10. 2001, C.558; 2 ♂, Khopoli & around, Raigad dist., Maharashtra, Coll. B.E.Y., 04. 10. 2001, C.1145; 2 ♀, Malavli, Pune dist., Maharashtra, Coll. S.A.A. & K.N.N., 20. 06. 2004, C.1156; 1 ♂, Bhushi Dam, Lonavla, Pune dist., Maharashtra, Coll. N.P.I.D., 31. 07. 2004, C.476; 1 ♂, Khandwal Stream, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. S.G.P., 19. 11. 2004, C.376; 1 ♀, Rajapur & around, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. D.B.B., 03. 08. 2005, C.401; 1 ♂, Kalyani River, 30km on Jalna-Nanded Road, Jalna dist., Maharashtra, Coll. S.G.P. & Party, 11. 11. 2005, C.1149; 1 ♂, On the way to Khamgaon via Dnyanganga W.L.S. & Khangaon-Shegaon Road, Buldhana dist., Maharashtra, Coll. S.G.P. & Party, 14. 11. 2005, C.464; 1 ♂, Nandura, on Talegaon Road, Wardha dist., Maharashtra, Coll. R.H.K., 11. 03. 2006, C.1154; 2 ♀, On the way to Shendi, Randa & around, Ahmednagar dist., Maharashtra, Coll. D.B.B., 09. 09. 2006, C.900; 1 ♀, On the way to Kalsubai Peak, Ahmednagar dist., Maharashtra, Coll. D.B.B., 10. 09. 2006, C.902; 1 ♂, On the way to Samsherpur, Ahmednagar dist., Maharashtra, Coll. D.B.B., 12. 09. 2006, C.921; 1 ♂, On the way to Siddha tek & around, south east of Shrigonda, Ahmednagar dist., Maharashtra, Coll. D.B.B., 16. 09. 2006, C.910; 1 ♂ & 3 ♀, Walawad & around, On the way to Karjat, east of Shrigonda, Ahmednagar dist., Maharashtra, Coll. D.B.B., 17. 09. 2006, C.923; 1 ♂, On the way to Udgir, Nilanga, Latur dist., Maharashtra, Coll. D.B.B., 27. 09. 2006, C.927; 1 ♂ & 3 ♀, Malegaon Talav, near Panhala Fort, Kolhapur dist., Maharashtra, Coll. P.D.R., 05. 01. 2007, C.931; 1 ♂, Dhigara Amba & around, Compartment No. 26, Chandoli N.P., Sangli dist., Maharashtra, Coll. S.G.P. & Party, 08. 01. 2007, C 350; 2 ♂, Khandala, Pune dist., Maharashtra, Coll. M.A.M., 07. 09. 2007, C 361; 1 ♂, Zolambi, Lapangarh, Compartment No. 20, Chandoli N.P., Sangli dist., Maharashtra, Coll. S.G.P. & Party, 07. 12. 2007, C 345; 1 ♂, Panhalache Pani, Chandoli N.P., Sangli dist., Maharashtra, Coll. P.P.K. & Party, 27. 01. 2008, C 353; 2 ♂, Laling stream, Dhule dist., Maharashtra, Coll.

M.J.J., 09. 07. 2011, C.442; 3 ♂ & 1 ♀, Stream in Tahmini Forest, Pune dist., Maharashtra, Coll. M.J.J., 14. 07. 2011, C.447; 11 ♂ & 9 ♀, Bhaka Devi & Around, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. S.K.P., 11. 08. 2011, C.469; 3 ♂ & 6 ♀, Near Forest Gate, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. S.K.P., 11. 08. 2011, C.470; 3 ♂ & 2 ♀, Ambevane, Lonavla, Pune dist., Maharashtra, Coll. S.S.J. & Party, 16. 09. 2011, C.795; 2 ♂, Stream on the way to Bhusi Dam, Lonavla, Pune dist., Maharashtra, Coll. S.S.J. & Party, 16. 09. 2011, C.801; 1 ♂, Tiger Point, Lonavla, Pune dist., Maharashtra, Coll. S.S.J. & Party, 16. 09. 2011, C.1109; 1 ♂, Mahabaleshwar, Satara dist., Maharashtra, Coll. Siddhartha S. Kulkarni, 16. 11. 2011, C.533; 1 ♀, Waghachepani, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.S.J. & Party, 28. 01. 2012, C.820; 1 ♂, Stream in Surangi, Radhanagari W.L.S., Kolhapur dist., Maharashtra, Coll. S.S.J. & Party, 29. 01. 2012, C.824; 3 ♂ & 5 ♀, Tahmini Ghat & around, Pune dist., Maharashtra, Coll. S.K.P., 14. 07. 2012, C.1116; 1 ♀, Near Robber's Cave, Mahabaleshwar, Satara dist., Maharashtra, Coll. S.S.K. & Party, 28. 07. 2012, C.1074; 1 ♂, Lanja, near Rajapur, Ratnagiri dist., Maharashtra, Coll. Siddhartha S. Kulkarni, 18. 09. 2012, C.1126 and 1 ♂, Near Blue Mormon Resort, Bhimashankar, Pune dist., Maharashtra, Coll. S.K.P., 01. 11. 2012, C.1127.

*Morphometry* : Males : CW : 10.92–45.78 (28.9±9.98); CL : 9–33.26 (21.46±7.17); CH : 4.7–20.22 (12.65±4.66) and Females : CW : 11.58–55.6 (32.2±12.83); CL : 9.86–45.9 (24.42±10.12); CH : 5.16–27.24 (14.51±6.86).

*Description* : Carapace wider than long, more convex; epigastric cristae well developed, anterior to postorbital cristae; postorbital cristae well developed, forms a concave ridge in dorsal view, not reaching anterolateral border; external orbital angle outer margin 2 times inner margin; epibranchial tooth poorly developed, markedly above level of postorbital cristae; frontal median triangle incomplete with only dorsal margin; epistomal median lobe without median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod with long flagellum, longer than ischium. Chelipeds unequal; carpal spine distinct, blunt. Ambulatory legs longest propodus more than thrice as long as broad. Suture between thoracic sternites 2, 3 distinct; between 3, 4 visible as shallow grooves on sides only. Male abdomen narrowly triangular; sixth male abdominal somite trapezoidal with straight lateral margins, broader than long, nearly equal in length to telson; telson tongue shaped; male abdominal cavity deep. G1 long, narrow, curving slightly outwards; terminal segment very long (0.9 times length of subterminal segment), tip bulged or slightly swollen. G2 short; distal segment short (0.2 times length of basal segment).

*Distribution* : India : Chhattisgarh (Bilaspur and Surguja), Gujarat (Bharuch and Surat), Madhya Pradesh (Hosangabad and Jabalpur), Maharashtra (Ahmednagar, Amravati, Aurangabad, Beed, Buldhana, Chandrapur, Dhule, Jalgaon, Jalna, Kolhapur, Latur, Mumbai Suburban, Nagpur, Nanded, Nashik, Pune, Raigad, Ratnagiri, Sangli, Satara, Sindhudurg, Solapur, Thane and Wardha) and Uttar Pradesh (Allahabad and Mirzapur).

*IUCN status* : Least Concern (Cumberlidge, 2008e).

*Remarks* : Report of *B. guerini* from Assam by Dutta (1983) is doubtful due to insufficient description and vague drawings. Records of this species from Andhra Pradesh, Karnataka and Tamil Nadu (Srivastava, 2005; 2007) require re-examination since they were studied without male gonopod characters. One unusual large male specimen (C. 769) from Bodhawad of Jalgaon district had a broadly triangular abdomen and the sixth abdominal somite was comparatively wider than other males, which at the outset gave an impression of female specimen. Altitudinal range varied from 2 m to 1325 m.

5. *Barytelphusa mccanni* (Chopra & Das, 1935)  
(Fig. 5A–G)

1935. *Paratylphusa (Barytelphusa) mccanni* Chopra & Das, *Rec. Indian Mus.*, **37**(3) : 85.

1970a. *Barytelphusa (Barytelphusa) guerini* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 33 (part) (not *Thelphusa guerini* H. Milne Edwards, 1853).

*Type locality* : Kumta, Uttar Kannada (=North Kanara) district, Karnataka (Earlier in Bombay Presidency), India.

*Material examined* : 3♂ & 3♀, Bhaje Caves near Karla, Pune dist., Maharashtra, Coll. B.K.T., 05. 11. 1963, C.1120; 1♂ & 1♀, Lonavla, Pune dist., Maharashtra, Coll. B.K.T., 13. 11. 1963, C.1121; 1♂ & 1♀, Karla Caves, Pune dist., Maharashtra, Coll. M.B.R., 18. 09. 1976, C.1122; 1♂, Juma Patti Station, Matheran Road, Raigad dist., Maharashtra, Coll. M.S.P., 20. 10. 1981, C.1123; 6♂ & 7♀, Dudhsagar Falls & around, Sanguem Taluka, South Goa dist., Goa, Coll. P.D.R., 01. 12. 1993, C.1111; 1♂, Mhatarbaachiwadi, Near Forest Gate, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. G.M.Y., 11. 08. 1994, C.1118; 2♂ & 1♀, Bhaka Devi, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. G.M.Y., 12. 08. 1994, C.1105; 2♂, Kanheri Caves, Sanjay Gandhi N.P., Borivali, Mumbai Suburban dist., Maharashtra, Coll. R.H.K. & Party, 19. 08. 1995, C.1104; 2♂ & 1♀, Kanheri Caves, Sanjay Gandhi N.P., Borivali, Mumbai Suburban dist., Maharashtra, Coll. P.P.K. & Party, 10. 10. 1995, C.1113; 3♂ & 2♀, Kanheri Caves, Sanjay Gandhi N.P., Borivali, Mumbai Suburban dist., Maharashtra, Coll. R.M.S. & Party, 10. 10. 1996, C.1107; 1♂, Kanheri Caves & around, Sanjay Gandhi N.P., Borivali, Mumbai Suburban dist., Maharashtra, Coll. R.M.S. & Party, 29. 09. 2001, C.1117; 1♂, On the way Tulsi Lake to Nursery & around, Sanjay Gandhi N.P., Borivali, Mumbai Suburban dist., Maharashtra, Coll. D.B.B. & Party, 24. 09. 2002, C.1114; 2♂, On the way to Ghatghar Dam & around, Ahmednagar dist., Maharashtra, Coll. D.B.B., 11. 09. 2006, C.1124; 1♂, Bhaka Devi, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. S.K.P., 11. 08. 2011, C.1102; 2♂ & 2♀, Bhaka Devi, Bhimashankar W.L.S., Pune dist., Maharashtra, Coll. S.K.P., 11. 08. 2011, C.1103; 5♂ & 11♀, Tiger Point, Lonavla, Pune dist., Maharashtra, Coll. S.S.J. & Party, 16. 09. 2011, C.1108; 1♀, Tahmini Ghat & around, Pune dist., Maharashtra, Coll. S.K.P., 14. 07. 2012, C.1115; 2♂ & 1♀, Gaganbawada, Kolhapur dist., Maharashtra, Coll. P.S.B. & Party, 14. 09. 2012,

C.1112 and 2♂, Tiger Point, Lonavla, Pune dist., Maharashtra, Coll. S.K.P. & Party, 20. 09. 2012, C.1119.

*Morphometry* : Males : CW : 18.46–60.08 (34.02±10.4); CL : 13.96–43.7 (25.11±7.44); CH : 7.24–25.7 (14.41±4.63) and Females : CW : 17.36–62.42 (31.44±9.41); CL : 13.14–47 (23.64±7.12); CH : 7.32–25.6 (13.26±4.14).

*Description* : Carapace wider than long, slightly convex anteriorly and gradually sloped posteriorly; dorsal surface nearly smooth; epigastric cristae slightly developed, anterior to postorbital cristae; postorbital cristae well developed, forms nearly a straight ridge sloping on either sides, not reaching anterolateral border; external orbital angle outer margin 2 times the inner margin; epibranchial tooth poorly developed, markedly above the level of postorbital cristae; frontal median triangle incomplete with only dorsal margin; epistomal median lobe without median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod with long flagellum, longer than ischium. Chelipeds unequal; carpal spine distinct, blunt. Ambulatory legs longest propodus more than thrice as long as broad. Suture between thoracic sternites 2, 3 distinct; between 3, 4 visible as shallow grooves on sides only. Male abdomen narrowly triangular; sixth male abdominal somite trapezoidal with straight lateral margins, broader than long, nearly equal in length to telson; telson tongue shaped; male abdominal cavity deep. G1 long, narrow with blunt tip; terminal segment distinctively long (0.8 times length of subterminal segment), clearly bent outwards medially, middle portion slightly wider than distal, basal portions; subterminal segment comparatively broad. G2 short; distal segment short (0.2 times length of basal segment).

*Distribution* : India : Goa (South Goa), Maharashtra (Ahmednagar, Kolhapur, Mumbai Suburban, Pune and Raigad) and Karnataka (Uttar Kannada).

*IUCN status* : Not evaluated (IUCN, 2013).

*Remarks* : Endemic to northern Western Ghats. Bott (1970a) synonymized this species with *B. guerini*. However, after examination of the type specimens we confirmed this as valid species since it possesses a distinct first male pleopod. Altitudinal range varied from 89 m to 1023 m.

#### 6. *Vanni travancorica* (Henderson, 1913)

(Fig. 6A–G)

1913. *Paratelphusa* (*Liotelphusa*) *malabarica* var. *travancorica* Henderson, *Rec. Indian Mus.*, **9**(2) : 47.
1931. *Paratelphusa* (*Barytelphusa*) *travancorica* Roux, *Rev. suisse (Zool.)*, **38**(4) : 53.
- 1970b. *Travancoriana travancorica* Bott, *Rev. Suisse Zool.*, **77**(2) : 336.
- 1970a. *Travancoriana malabarica* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 42 (part) (not *Paratelphusa* (*Liotelphusa*) *malabarica* Henderson, 1912).
2007. *Vanni travancorica* Bahir and Yeo, *Raffles B. Zool., Supp. No.* **16** : 338.

*Type locality* : Ponmudi, Thiruvananthapuram district, Kerala (Earlier in Travancore), India.

*Material examined* : 3♂, Nalla at 392 milestone on Jog-Honnar Road, Uttar Kannada dist., Karnataka, Coll. B.S.L., 09. 02. 1972, C.390.

*Morphometry* : Males : CW : 12.6–17.76 (15.18±3.65); CL : 10.9–14.16 (12.53±2.31); CH : 5.78–8.26 (7.02±1.75).

*Description* : Carapace slightly broader than long, slightly convex; dorsal surface smooth except for rugose epigastric cristae, postorbital cristae and lateral margins; postorbital cristae distinct, reaching rugose epigastric cristae; external orbital angle outer margin 2.5 times length of inner margin; epibranchial tooth distinct, cleft visible; cervical grooves shallow, broad. Third maxilliped exopod with long flagellum. Suture between thoracic sternites 2, 3 very shallow, not reaching lateral margins; between 3, 4 indistinct. Male abdomen T-shaped; sixth male abdominal somite squarish, longer than broad. G1 straight, inner margin characteristically curved or angled just below juncture between terminal and subterminal segments; terminal segment narrow, cone-shaped, short (0.2 times length of subterminal segment). G2 distal segment long (0.35 times length of basal segment).

*Distribution* : India : Karnataka (Uttar Kannada) and Kerala (Thiruvananthapuram).

*IUCN status* : Data Deficient (Esser & Cumberlidge, 2008a).

*Remarks* : Bott (1970a) synonymized this species under *Travancoriana malabarica* (Henderson, 1912). However, Bahir and Yeo (2007) considered it as a valid species, but placed in the new genus *Vanni* Bahir & Yeo, 2007. The species was found at 554 m altitude.

### 7. *Gubernatoriana gubernatoris* (Alcock, 1909)

(Fig. 7A–G)

1909. *Paratelphusa (Globitelphusa) gubernatoris*, Alcock, *Rec. Indian Mus.*, **3**(4) : 379.

1910. *Paratelphusa (Globitelphusa) gubernatoris* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, **I**(2) : 117.

1970a. *Gubernatoriana gubernatoris* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 44.

*Type locality* : Mahabaleshwar (=Mahableshwar), Satara district, Maharashtra, India.

*Material examined* : 8♂ & 7♀, Dhobi Waterfall, Mahabaleshwar, Satara dist., Maharashtra, Coll. B.S.L., 19. 02. 1965, C.971 and 1♂ & 3♀, Fitzgerald Pass, Satara dist., Maharashtra, Coll. A.P.K., 05. 10. 1972, C.785.

*Morphometry* : Males : CW : 7.4–16.28 (12.38±4.54); CL : 6.66–13.56 (10.53±3.53); CH : 3.52–8.42 (6.6±2.68) and Females : CW : 6.9–17.1 (12.85±5.31); CL : 6.08–14.82 (11.13±4.52); CH : 3.2–8.18 (6.21±2.65).

*Description* : Carapace squarer, convex anteriorly and gradually narrow posteriorly; dorsal

surface almost smooth; anterolateral carapace gently inflated in frontal view; anterolateral margin short, nearly straight beyond epibranchial tooth; posterolateral margin with fine, oblique, long striations; front strongly deflexed, square-cut, flat, two fifth of carapace width; frontal margin nearly straight; epigastric cristae slightly developed; postorbital cristae indistinct; external orbital angle less distinct with outer margin equal in length to inner margin; epibranchial tooth indistinct or just an impression well below level of supraorbital margin; post orbital region nearly flat; branchial regions gently inflated; cervical grooves hardly visible; mesogastric groove long without bifurcation posteriorly; H-groove slightly visible; frontal median triangle incomplete with only dorsal margin; epistomal median lobe broadly triangular, without median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod without flagellum, longer than ischium, ventral sulcus on ischium indistinct or slightly visible near to centre. Chelipeds unequal, smooth; teeth on them blunt; fingers equal in length with palm; one large tooth on fixed finger of larger chela; big gap between the fingers of larger chela when tips are in contact; carpal spine indistinct or slightly developed. Ambulatory legs longer with fine, short, blackish bristles; dactylus normally longer than propodus; longest propodus thrice as long as broad; spines on distal part of lower border of propodus very distinct; conspicuous four rows of spines on dactylus. Suture between thoracic sternites 2, 3 indistinct; between 3, 4 slightly visible as shallow grooves on sides only. Male abdomen short T-shaped; fifth male abdominal somite much broader than long; sixth male abdominal somite slightly broader than long, shorter than telson, distal margin slightly wider than proximal margin, with nearly straight lateral margins; telson equal in length to proximal width, broadly triangular at apex; male abdominal cavity deep and long, extending beyond level of cheliped bases. G1 short, stout, straight; terminal segment long (0.45 times length of subterminal segment), tip pointed; subterminal segment much broader than terminal segment, basal one third portion slightly broader than the distal two third portions. G2 short with a very short or vestigial distal segment, proximal one third portion of basal segment distinctly stouter than distal two third portions.

*Distribution* : India : Maharashtra (Satara).

*IUCN status* : Data Deficient (Cumberlidge, 2008f).

*Remarks* : Bott (1970a) placed it under the genus *Gubernatoriana* Bott, 1970. Altitudinal range varied from 423 m to 1207 m.

#### 8. *Gubernatoriana pilosipes* (Alcock, 1909)

(Fig. 8A–G)

1909. *Paratelphusa* (*Globitelphusa*) *pilosipes*, Alcock, *Rec. Indian Mus.*, **3**(4) : 379.

1910. *Paratelphusa* (*Globitelphusa*) *pilosipes* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, **I**(2) : 118.

1970a. *Gubernatoriana pilosipes* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 46.

*Type locality* : Mahabaleshwar (=Mahableshtar), Satara district, Maharashtra, India.

*Material examined* : 1 ♀, Stream near Trimbak, Nashik dist., Maharashtra, Coll. M.B.R., 20. 10. 1973, C.862 and 6 ♂ & 2 ♀, 60km north of Pundra on Ajra Road, Kolhapur dist., Maharashtra, Coll. D.B.B., 28.09. 1986, C.919.

*Morphometry* : Males : CW : 9.38–13 (10.89±1.88); CL : 8.7–11.72 (9.97±1.56); CH : 4.14–5.5 (4.75±0.69) and Females : CW : 9.16–11.8 (10.48±1.87); CL : 8.34–10.34 (9.34±1.41); CH : 4.14–4.54 (4.34±0.28).

*Description* : Carapace squarer, slightly convex anteriorly and posteriorly; dorsal surface and lateral sides rugose; anterolateral margin sub-cristiform, nearly straight from epibranchial tooth; posterolateral margin nearly straight with strong, oblique striations; front slightly depressed, vertically deflexed, with concave lateral margins, one third of carapace width; frontal margin slightly concave and finely serrated; epigastric cristae distinct, broad; postorbital cristae slightly visible; external orbital angle poorly developed with outer margin 2 times inner margin; epibranchial tooth indistinct, distinctly below level of supraorbital margin; post orbital region shallow; branchial regions nearly flat; cervical grooves indistinct; mesogastric groove long, not bifurcated posteriorly, slightly extending into frontal region; H-groove clear; frontal median triangle incomplete with only dorsal margin; epistomal median lobe broadly triangular, without median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod without flagellum, longer than ischium, ventral sulcus on ischium distinct, not parallel to inner margin. Chelipeds unequal; teeth on fingers finely serrated except for few blunt teeth; very small gape when tips are in contact; tips of both the fingers broadly rounded or spoon tipped; fingers equal in length to palm; carpal spine distinct, blunt. Ambulatory legs much longer than chelipeds, smooth except for few fine bristles on dactylus; dactylus shorter than propodus; longest propodus four times as long as broad. Sternum much broad; suture between thoracic sternites 2, 3 visible as a small groove; between 3, 4 visible as shallow grooves on sides only. Male abdomen almost T-shaped; fifth male abdominal somite much broader than long with concave lateral margins; sixth male abdominal somite slightly broader than long, nearly equal in length to telson with nearly straight lateral margins; telson nearly triangular, slightly shorter than its proximal width; male abdominal cavity deep and long, extending beyond level of cheliped bases. G1 short, gently stout; terminal segment slightly long (0.35 times length of subterminal segment), curved outward, tip pointed; subterminal segment comparatively broader than terminal segment, basal two third portions slightly broader than distal one third portion. G2 very short with a very short or vestigial distal segment, proximal half portion of basal segment much broader than distal half portion.

*Distribution* : India : Maharashtra (Kolhapur, Nashik and Satara).

*IUCN status* : Data Deficient (Cumberlidge, 2008g).

*Remarks* : Bott (1970a) placed it under the genus *Gubernatoriana* Bott, 1970. Distinct feature of the species is the broadly rounded tip of cheliped fingers. Altitudinal range varied from 684m to 716m.

**9. *Inglethelphusa fronto* (Alcock, 1909)**  
(Fig. 9A–G)

1909. *Paratelphusa (Globitelphusa) fronto*, Alcock, *Rec. Indian Mus.*, **3**(4) : 379.

1910. *Paratelphusa (Globitelphusa) fronto* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, **I**(2) : 118.

1970a. *Gubernatoriana fronto* Bott, *Abh. senckenb. naturforsch. Ges.*, **526** : 27.

*Type locality* : Mahabaleshwar (=Mahableshwar), Satara district, Maharashtra, India.

*Material examined* : 3 ♂ & 1 ♀, Dhobi Waterfall, Mahabaleshwar, Satara dist., Maharashtra, Coll. B.S.L., 19. 02. 1965, C.972; 2 ♂, Fitzgerald Pass, Satara dist., Maharashtra, Coll. A.P.K., 05. 10. 1972, C.1125 and 1 ♂ & 1 ♀, Stream in Koyna W.L.S., Satara dist., Maharashtra, Coll. M.J.J., 17. 05. 2011, C.412.

*Morphometry* : Males : CW : 7.26–13.12 (10.88±3.16); CL : 6.52–11.4 (9.56±2.65); CH : 4.36–7.46 (6.31±1.7) and Females : CW : 11.24–14.04 (12.64±1.98); CL : 9.9–11.48 (10.69±1.12); CH : 6.6–7.98 (7.29±0.98).

*Description* : Carapace squarer, highly convex anteriorly and convex posteriorly; dorsal surface almost smooth; anterolateral carapace inflated in frontal view; anterolateral margin short, very slightly arched; posterolateral margin with very fine striations; front rectangular shape, flat, almost vertically deflexed, nearly half the carapace width; frontal margin almost straight; epigastric cristae distinct, very low, broad, blunt; postorbital cristae hardly distinguishable; external orbital angle poorly developed; epibranchial tooth slightly visible, very close to level of supraorbital margin; post orbital region very shallow; branchial regions inflated, rugose; cervical grooves indistinct; mesogastric groove long, shallow, extending into frontal region, distinctly bifurcating posteriorly; H-groove visible; frontal median triangle incomplete with only dorsal margin; epistomal median lobe semicircular, without median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod without flagellum, very short, shorter than ischium, ventral sulcus on ischium faint, near to the centre. Chelipeds unequal, smooth; teeth on them blunt, almost equal in size; dactylus longer than palm; fingers on larger chela meet only at tip; carpal spine distinct, blunt; carpus has some tufts of blackish bristles along its anterior border. Ambulatory legs long having tufts of 3 to 4 long, stiff, coarser, blackish bristles with yellow tips; dactylus longer than propodus; longest propodus thrice as long as broad. Suture between thoracic sternites 2, 3 and between 3, 4 indistinct, but with bunch of bristles. Male abdomen elongated T-shaped; fifth male abdominal somite slightly broader than long with concave lateral margins; sixth male abdominal somite longer than broad, shorter than telson, proximal border less wide than distal border; telson long, broadly rounded at apex; male abdominal cavity deep and very long, extending beyond level of third maxilliped base. G1 very long, nearly straight, narrow; terminal segment very long (0.80 times the length of subterminal segment), tip pointed; subterminal segment slightly broader at base. G2 very short with a very short or vestigial distal segment, proximal half of basal segment distinctly broader than distal half.

*Distribution* : India : Maharashtra (Satara) and Karnataka (Uttar Kannada).

*IUCN status* : Data Deficient (Cumberlidge, 2008h).

*Remarks* : *Inglethelphusa* Bott, 1970 is a monotypic genus. *Inglethelphusa fronto* can easily be distinguished from all other species of the region by its very long, straight and narrow first male pleopod. Altitudinal range varied from 423 m to 1207 m.

10. *Oziotelphusa wagrakarowensis* (Rathbun, 1904)  
(Fig. 10A–G)

1904. *Potamon (Potamon) wagrakarowensis* Rathbun, *Nouv. Arch. Mus. Hist. nat. Paris*, (4)6 : 292.
1910. *Paratelphusa (Oziotelphusa) hydrodromus* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, I(2) : 97 (part) (not *Cancer hydrodromus* Herbst, 1794).
- 1970a. *Oziotelphusa senex senex* Bott, *Abh. senckenb. naturforsch. Ges.*, 526 : 100 (part) (not *Cancer senex* Fabricius, 1798).
2005. *Oziotelphusa wagrakarowensis* Bahir and Yeo, *Raffles B. Zool., Supp. No.* 12 : 87.

*Type locality* : Vajrakarur (=Wagra-Karow), Anantapur district, Andhra Pradesh, India [Rathbun (1904) mentioned type locality as Wagra-Karow, beside Bellary (=Bellari) city, which is in Karnataka state].

*Material examined* : 2♂ & 2♀, Nalla at Kabarali Village, Nanded dist., Maharashtra, Coll. K.R.R., 16. 08. 1971, C.1002; 6♂ & 12♀, Malekar Tank, near Katerpalem, Kolar dist., Karnataka, Coll. M.B.R. & Party, 04. 03. 1978, C.567; 11♂ & 5♀, Malekar Tank, Kolar dist., Karnataka, Coll. M.B.R. & Party, 03. 03. 1978, C.445; 3♂ & 1♀, Malur Tank, Malur, Kolar dist., Karnataka, Coll. M.B.R. & Party, 05. 03. 1978, C.450; 9♂, Abdul Ali Garden, Bangarpet, Kolar dist., Karnataka, Coll. M.B.R. & Party, 06. 03. 1978, C.564; 28♂ & 7♀, Mashid Basalguntha Tank, Mulbagal, Kolar dist., Karnataka, Coll. M.B.R. & Party, 08. 03. 1978, C.444; 9♂ & 2♀, Dodda Hassala Lake, Dodda Hassala, Kolar dist., Karnataka, Coll. M.B.R. & Party, 10. 03. 1978, C.563; 8♂ & 2♀, Kanepalli Tank, Chintamani, Chikballapura dist., Karnataka, Coll. M.B.R. & Party, 13. 03. 1978, C.457; 6♂ & 1♀, Gavana Tank, Siddalghata, Chikballapura dist., Karnataka, Coll. M.B.R. & Party, 15. 03. 1978, C.566; 7♂, Appayya Kunta, Chikballapura, Chikballapura dist., Karnataka, Coll. M.B.R. & Party, 17. 03. 1978, C.449; 12♂ & 9♀, Manchanpani Tank & around, Chikballapura, Chikballapura dist., Karnataka, Coll. M.B.R. & Party, 18. 03. 1978, C.565; 7♂ & 3♀, Vijayapura Tank, Bangalore Rural dist., Karnataka, Coll. M.B.R. & Party, 19. 03. 1978, C.451; 3♂, Sind River near Sindkhed, Solapur dist., Maharashtra, Coll. A.S.M., 22. 11. 1978, C.803; 1♂, Nagamma Tank, on Vizapur Road, Solapur dist., Maharashtra, Coll. A.S.M., 24. 11. 1978, C.810; 2♂ & 4♀, Pimpaldara Nalla near Padasali-Madha, Solapur dist., Maharashtra, Coll. A.S.M., 24. 08. 1983, C.809; 2♂, Nalla near Mhaisal, 15km from Miraj, Miraj Taluka, Sangli dist., Maharashtra, Coll. A.S.M. & Party, 27. 09. 1984, C.916; 3♂ & 2♀,

Pdoddane Katte & Karigonda Katte, Bandipur T.R., Chamarajanagar dist., Karnataka, Coll. G.M.Y., 21. 09. 1989, C.606; 6♂ & 15♀, Stream near Hosur, Siddapur, Uttar Kannada? dist., Karnataka, Coll. R.M.S. & Party, 18. 09. 1991, C.456; 1♂ & 1♀, Banegaon, Near Nannaj, Solapur dist., Maharashtra, Coll. P.S.B. & Party, 04. 10. 2011, C.521 and 1♂, Nadi Kinara, Vannur, Kolhapur dist., Maharashtra, Coll. S.S.K., 13. 09. 2012, C.1084.

*Morphometry* : Males : CW : 17.3–37.92 (26.17±6.91); CL : 13.76–29.14 (20.29±5.23); CH : 8.347–27.9 (13.63±5.15) and Females : CW : 14.62–37.24 (26.91±6.78); CL : 11.74–28.54 (21.03±5.24); CH : 7.6–20.12 (13.86±3.86).

*Description* : Carapace broader than long, highly convex anteriorly and narrow posteriorly; dorsal surface smooth; anterolateral carapace highly convex in frontal view; anterolateral margin smooth, first oblique striae on branchial regions originates as cristae of anterolateral border, curving into branchial regions; posterolateral margin with fine striations; front flat, nearly one third of carapace width; frontal margin concave medially; epigastric cristae slightly developed, anterior to postorbital cristae; postorbital cristae sharp, nearly straight, not reaching anterolateral margin; external orbital angle outer margin 2 times inner margin; epibranchial tooth moderate in size, slightly above level of postorbital cristae, not in level with supraorbital margin; post orbital region slightly deep; branchial regions inflated; cervical grooves narrow, very shallow, very much interrupted, not reaching up to level of postorbital cristae; H-groove clear; frontal median triangle complete, not as broad as frontal margin, dorsal margin fused with lateral margins; epistomal median lobe with distinct and sharp median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod with long flagellum, longer than ischium. Chelipeds smooth, may or may not be equal, with blunt tooth; 2 to 3 larger teeth on fixed finger of larger chela; carpal spine strong and blunt. Ambulatory legs smooth, dactylus subequal in length to propodus; longest propodus thrice as long as broad. Suture between thoracic sternites 2, 3 and between 3, 4 indistinct. Male abdomen T-shaped with concave lateral borders; sixth male abdominal somite trapezoidal, wider than long, subequal in length to telson with distinctly concave lateral margins; male abdominal cavity deep. G1 short; terminal segment short (0.30 times length of subterminal segment), hook like, tip pointed; subterminal segment basal two third portions of distinctly stouter than proximal one third portion. G2 long; distal segment slightly long (0.3 times length of basal segment).

*Distribution* : India : Andhra Pradesh (Anantapur), Maharashtra (Kolhapur, Nanded, Sangli and Solapur) and Karnataka (Bangalore Rural, Chamarajanagar, Chikballapura, Kolar, Mysore and Uttar Kannada).

*IUCN status* : Vulnerable (Esser & Cumberlidge, 2008b).

*Remarks* : *Oziotelphusa wagrakarowensis* is close to the newly described species *Oziotelphusa ganjamensis* Pati & Sharma, 2012 (Pati & Sharma, 2012b). However, the distinct hook like G1

terminal segment is alone sufficient to distinguish it from any other species of the genus. Altitudinal range varied from 355 m to 905 m.

11. *Spiralothelphusa hydrodroma* (Herbst, 1794)  
(Fig. 11A–G)

1794. *Cancer hydrodromus* Herbst, *Naturgesch. Krabben und Krebse*, 2 : 164.

1904. *Potamon (Potamon) hydrodromus* Rathbun, *Nouv. Arch. Mus. Hist. nat. Paris*, (4)6 : 287.

1910. *Paratelphusa (Oziotelphusa) hydrodromus* Alcock, *Cat. Ind. decap. Crust. Coll. Ind. Mus.*, I(2) : 97.

1970a. *Spiralothelphusa hydrodroma* Bott, *Abh. senckenb. naturforsch. Ges.*, 526 : 97.

*Type locality* : Karaikal (=Karikal at Tranquebar), Karaikal district, Puducherry Union Territory, India.

*Material examined* : 2 ♀, Katezari, Waghna, 8km west of Tadoba N.P., Chandrapur dist., Maharashtra, Coll. R.M.S. & Party, 29. 09. 1994, C.522; 1 ♂ & 1 ♀, Ambawadi, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. S.G.P., 19. 08. 1995, C.524; 5 ♂ & 4 ♀, Telia Dam, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. S.G.P., 20. 08. 1995, C.523 and 1 ♂ & 1 ♀, Katezari, Tadoba N.P., Chandrapur dist., Maharashtra, Coll. P.P.K., 11. 04. 2000, C.534.

*Morphometry* : Males : CW : 15.08–22.04 (18.56±4.92); CL : 12.36–17.88 (15.12±3.9); CH : 7.74–11.36 (9.55±2.56) and Females : CW : 18.78–22.68 (20.73±2.76); CL : 14.74–17.42 (16.08±1.9); CH : 10–12.1 (11.05±1.49).

*Description* : Carapace slightly broader, convex anteriorly and narrow posteriorly; dorsal surface smooth; anterolateral carapace slightly inflated in frontal view; anterolateral margin smooth, first oblique striae on branchial regions originates as cristae of anterolateral border, curving into branchial regions at base of epibranchial region, strongest striae on lateral border; posterolateral margin with very few fine oblique striae; front flat, nearly two fifth of carapace width; frontal margin slightly concave medially; epigastric cristae slightly developed, sharp, straight, anterior to postorbital cristae; postorbital cristae distinct, sharp, nearly straight, almost reaching to anterolateral margin; external orbital angle outer margin nearly 2 times inner margin; epibranchial tooth distinct, sharp, slightly above level of postorbital cristae, not in level with supraorbital margin; post orbital region slightly deep; branchial regions gently inflated; cervical grooves very shallow, narrow, very much interrupted, not reaching up to level of postorbital cristae; H-groove distinct; frontal median triangle complete, not as broad as frontal margin, dorsal margin not fused with lateral margins; epistomal median lobe with acute median tooth. Exopods of first and second maxillipeds with long flagellum; third maxilliped exopod with long flagellum, longer than ischium, ventral sulcus of ischium deep, not parallel to inner border of ischium. Chelipeds nearly equal in size, smooth; teeth on them smaller and coarser; carpal spine

distinct, sharp. Ambulatory legs long, smooth, dactylus almost equal in length to propodus; longest propodus thrice as long as broad. Suture between thoracic sternites 2, 3 and between 3, 4 indistinct. Male abdomen almost triangular; sixth male abdominal somite distinctly broader than long, subequal in length to telson; male abdominal cavity deep. G1 short with a short terminal segment; terminal segment and distal portion of subterminal segment twisted clockwise a full round, directed outwards; basal two third portion of subterminal segment much broad and stout. G2 long with a long distal segment (0.5 times the length of basal segment).

*Distribution* : India : Maharashtra (Chandrapur, Satara?) and Puducherry (Karaikal).

*IUCN status* : Least Concern (Cumberlidge, 2008i).

*Remarks* : *Spiralothelphusa hydrodroma* was also reported from many places in India (Andhra Pradesh, Bihar, Goa, Jharkhand, Karnataka, Kerala, Maharashtra, Odisha, Puducherry, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal) (Alcock, 1910; Deb, 1998a, b; Srivastava, 2005, 2007, 2009; Dev Roy, 2010). We are not sure about distribution of the species in India although it can occupy any freshwater ecosystem and even brackish water systems (Bott, 1970a; Deb, 1998b). In such circumstance, it is prudent to re-examine the available specimens present in National Zoological Collection of Head Quarters and Regional Centers/other institutions. Altitudinal range varied from 209 m to 240 m.

## SUMMARY

During the systematic studies on freshwater crabs accumulated (approximately 2800 examples) in the collection of Western Regional Centre, Zoological Survey of India, Pune, a total of 11 species under 7 genera of family Gecarcinucidae were identified. Systematics and distribution pattern of all the identified species are provided. *Barytelphusa cunicularis* (Westwood, 1836) and *Barytelphusa guerini* (H. Milne Edwards, 1853) are most common species in the study area. While *Oziotelphusa wagrakarowensis* (Rathbun, 1904) is reported for the first time from Maharashtra, *Vanni travancorica* (Henderson, 1913) was found to be a new record to Karnataka. The genus *Barytelphusa* has been systematically reworked and only 3 species are recognized.

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**Table-1: District-wise distribution of freshwater crabs studied from NZC, ZSI, WRC, Pune**

State	District	Species										
		1	2	3	4	5	6	7	8	9	10	11
Gujarat	Bharuch	–	–	–	+	–	–	–	–	–	–	–
	Surat	–	–	–	+	–	–	–	–	–	–	–
Maharashtra	Ahmednagar	–	+	+	+	+	–	–	–	–	–	–
	Amravati	–	–	+	+	–	–	–	–	–	–	–
	Aurangabad	–	–	+	+	–	–	–	–	–	–	–
	Beed	–	–	+	+	–	–	–	–	–	–	–
	Buldhana	–	–	+	+	–	–	–	–	–	–	–
	Chandrapur	–	–	+	+	–	–	–	–	–	–	+
	Dhule	–	–	+	+	–	–	–	–	–	–	–
	Jalgaon	–	–	+	+	–	–	–	–	–	–	–
	Jalna	–	–	+	+	–	–	–	–	–	–	–
	Kolhapur	+	–	+	+	+	–	–	+	–	+	–
	Latur	–	–	+	+	–	–	–	–	–	–	–
	Mumbai Suburban	–	–	+	+	+	–	–	–	–	–	–
	Nagpur	–	–	+	+	–	–	–	–	–	–	–
	Nanded	–	–	+	+	–	–	–	–	–	+	–
	Nandurbar	–	–	+	–	–	–	–	–	–	–	–
	Nashik	–	+	+	+	–	–	–	+	–	–	–
	Parbhani	–	–	+	–	–	–	–	–	–	–	–
Pune	+	+	+	+	+	–	–	–	–	–	–	
Raigad	–	–	+	+	+	–	–	–	–	–	–	
Ratnagiri	–	–	+	+	–	–	–	–	–	–	–	
Sangli	–	–	+	+	–	–	–	–	–	+	–	

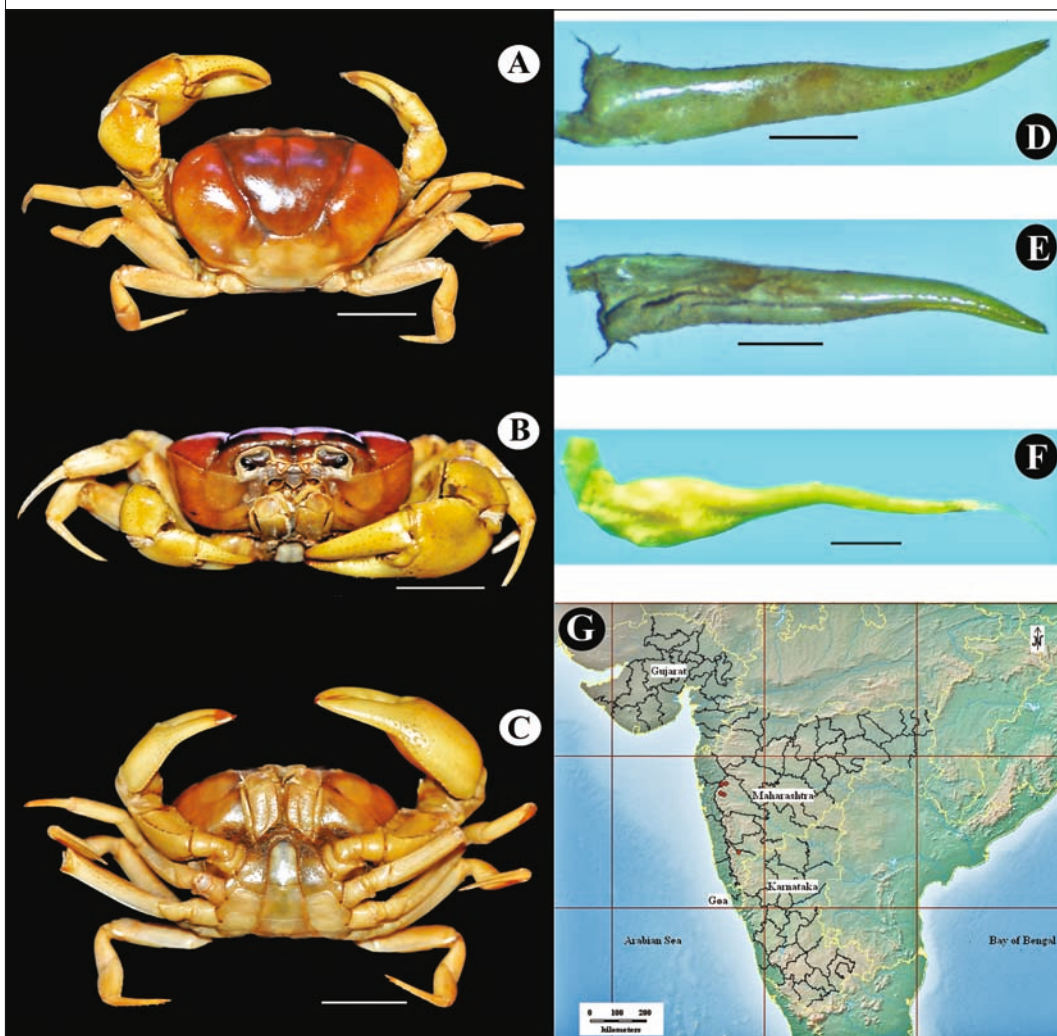
Table-1: Contd. ...

State	District	Species										
		1	2	3	4	5	6	7	8	9	10	11
Goa	Satara	-	-	+	+	-	-	+	-	+	-	-
	Sindhudurg	-	-	+	+	-	-	-	-	-	-	-
	Solapur	-	-	+	+	-	-	-	-	-	+	-
	Thane	-	-	+	+	-	-	-	-	-	-	-
	Wardha	-	-	+	+	-	-	-	-	-	-	-
	Yavatmal	-	-	+	-	-	-	-	-	-	-	-
	North Goa	-	-	+	-	-	-	-	-	-	-	-
Goa	South Goa	-	-	+	-	+	-	-	-	-	-	-
	Karnataka	Bangalore Rural	-	-	-	-	-	-	-	-	-	+
Chamarajanagar		-	-	+	-	-	-	-	-	-	+	-
Chikballapura		-	-	-	-	-	-	-	-	-	+	-
Chikkamagaluru		-	-	+	-	-	-	-	-	-	-	-
Dakshina Kannada		-	-	+	-	-	-	-	-	-	-	-
Kodagu		-	-	+	-	-	-	-	-	-	-	-
Kolar		-	-	-	-	-	-	-	-	-	+	-
Shimoga		-	-	+	-	-	-	-	-	-	-	-
Udupi		-	-	+	-	-	-	-	-	-	-	-
Uttar Kannada		-	-	+	-	-	+	-	-	-	+	-
Examples studied		<b>13</b>	<b>11</b>	<b>1598</b>	<b>858</b>	<b>69</b>	<b>3</b>	<b>22</b>	<b>9</b>	<b>8</b>	<b>193</b>	<b>15</b>

1: *Gecarcinucus jacquemontii* (H. Milne Edwards, 1844); 2: *Gecarcinucus edwardsi* Alcock, 1909; 3: *Barytelphusa cunicularis* (Westwood, 1836); 4: *Barytelphusa guerini* (H. Milne Edwards, 1853); 5: *Barytelphusa mccanni* (Chopra & Das, 1935); 6: *Vanni travancorica* (Henderson, 1913); 7: *Gubernatoriana gubernatoris* (Alcock, 1909); 8: *Gubernatoriana pilosipes* (Alcock, 1909); 9: *Inglethelphusa fronto* (Alcock, 1909); 10: *Oziotelphusa wagrakarowensis* (Rathbun, 1904); 11: *Spiralothelphusa hydrodroma* (Herbst, 1794)

Plate - I

*Gecarcinus jacquemontii* H.Milne Edwards, 1844



**Fig. 1:** *Gecarcinus jacquemontii* H. Milne Edwards, 1844 (ZSI, WRC-C.396).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1; E, ventral view of right G1;

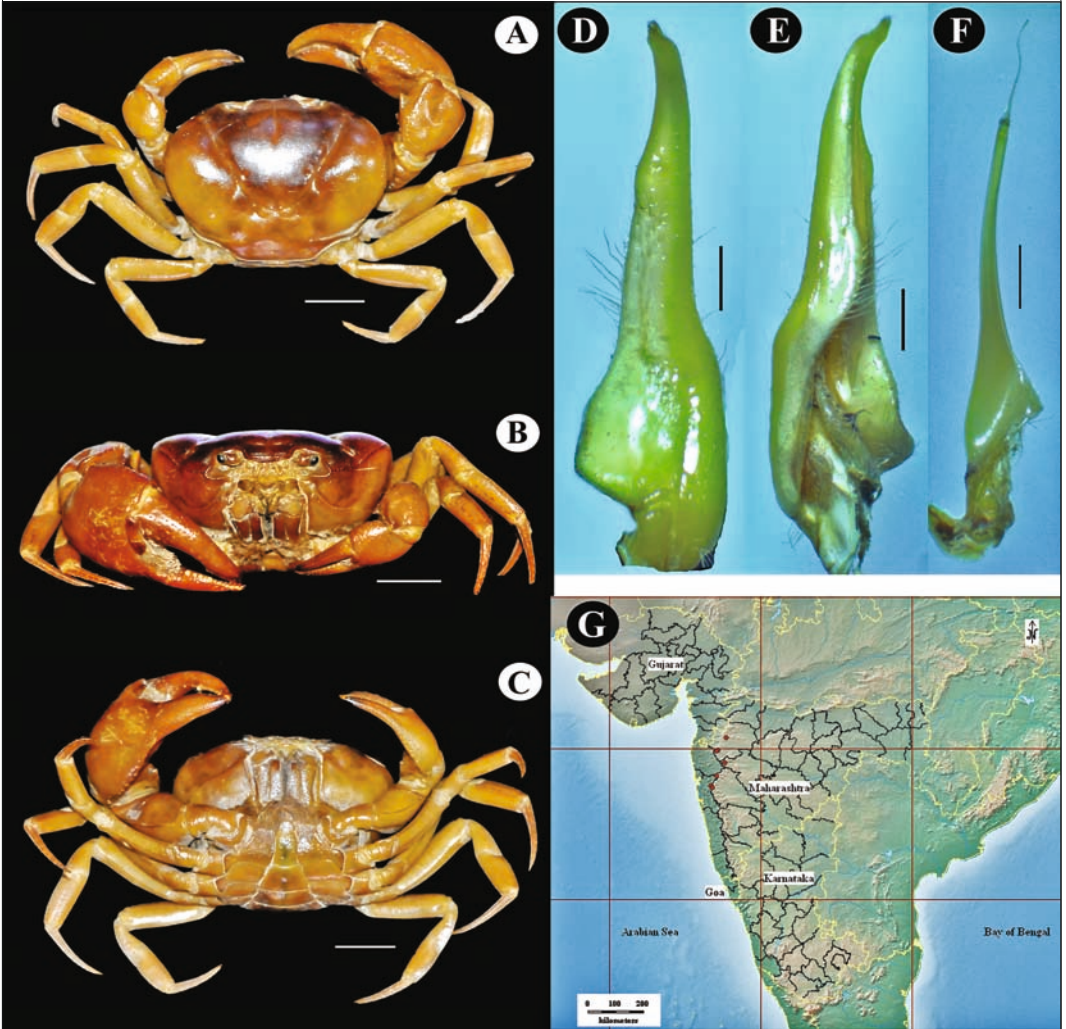
F, right G2 (ZSI, WRC-C.667);

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - II

*Gecarcinus edwardsi* Alcock, 1909



**Fig. 2:** *Gecarcinus edwardsi* Alcock, 1909 (ZSI, WRC-C.468).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

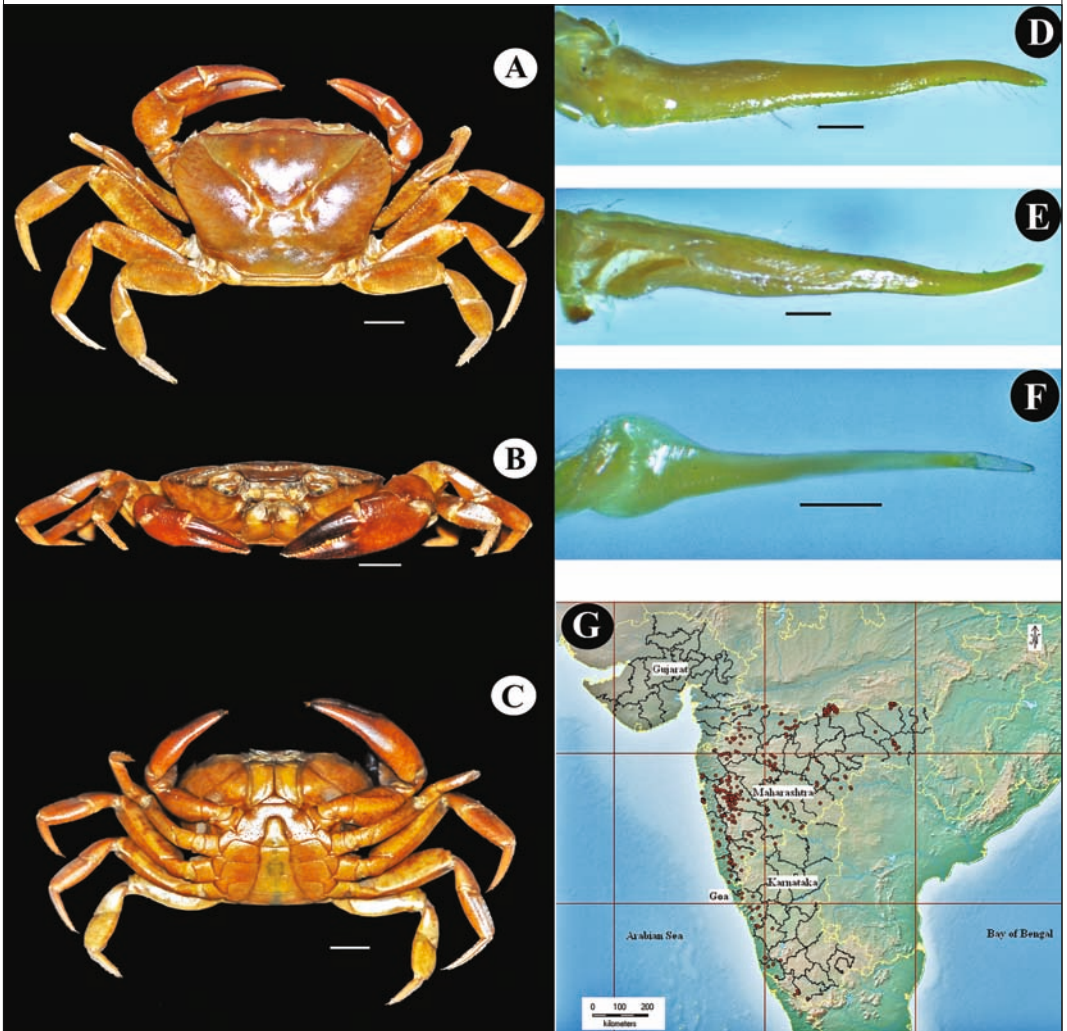
F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - III

*Barytelphusa cunicularis* (Westwood, 1836)



**Fig. 3:** *Barytelphusa cunicularis* (Westwood, 1836) (ZSI, WRC-C.653).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

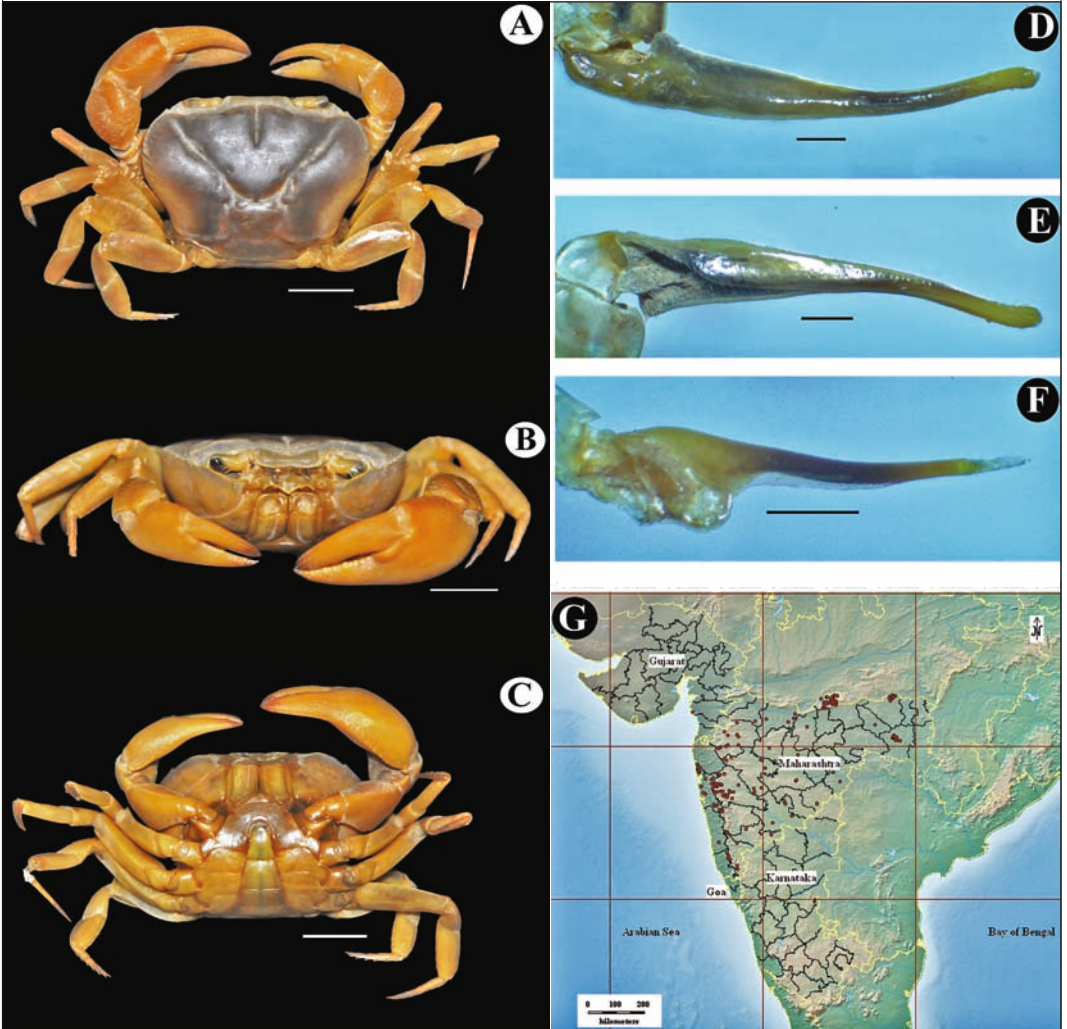
F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - IV

*Barytelphusa guerini* (H. Milne Edwards, 1853)



**Fig. 4:** *Barytelphusa guerini* (H. Milne Edwards, 1853) (ZSI, WRC-C.869).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

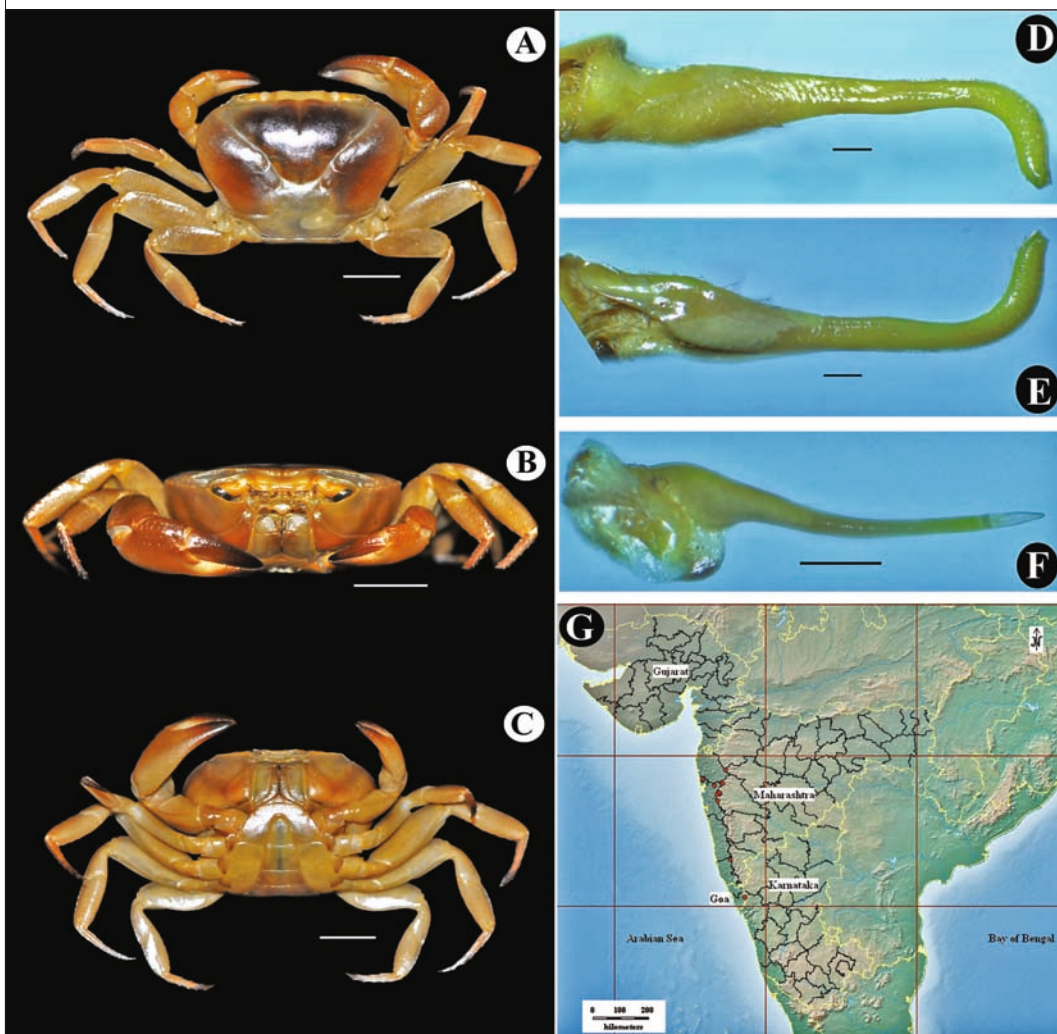
F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - V

*Barytelphusa mccanni* (Chopra & Das, 1935)



**Fig. 5:** *Barytelphusa mccanni* (Chopra & Das, 1935) (ZSI, WRC-C.1118).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

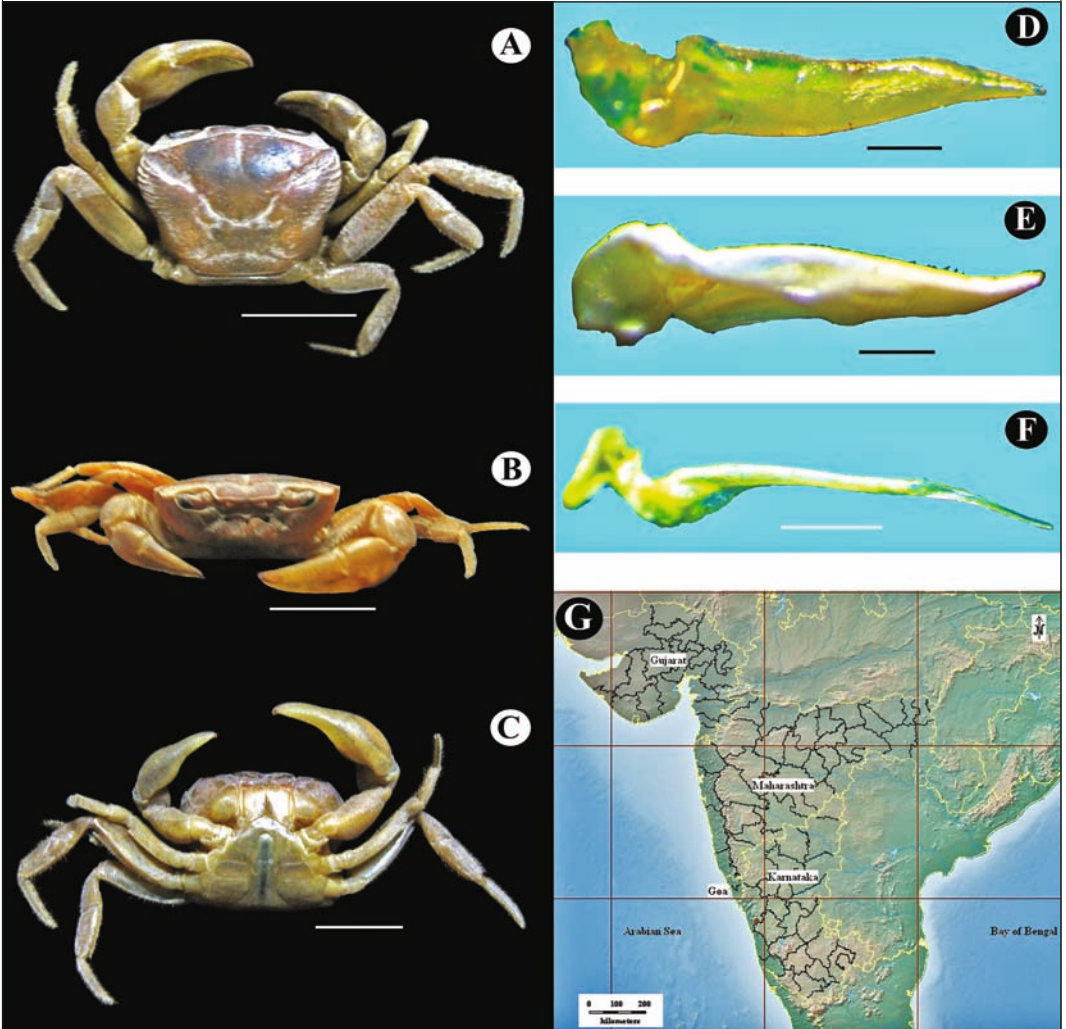
E, ventral view of right G1; F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - VI

*Vanni travancorica* (Henderson, 1913)



**Fig. 6:** *Vanni travancorica* (Henderson, 1913) (ZSI, WRC-C.390).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

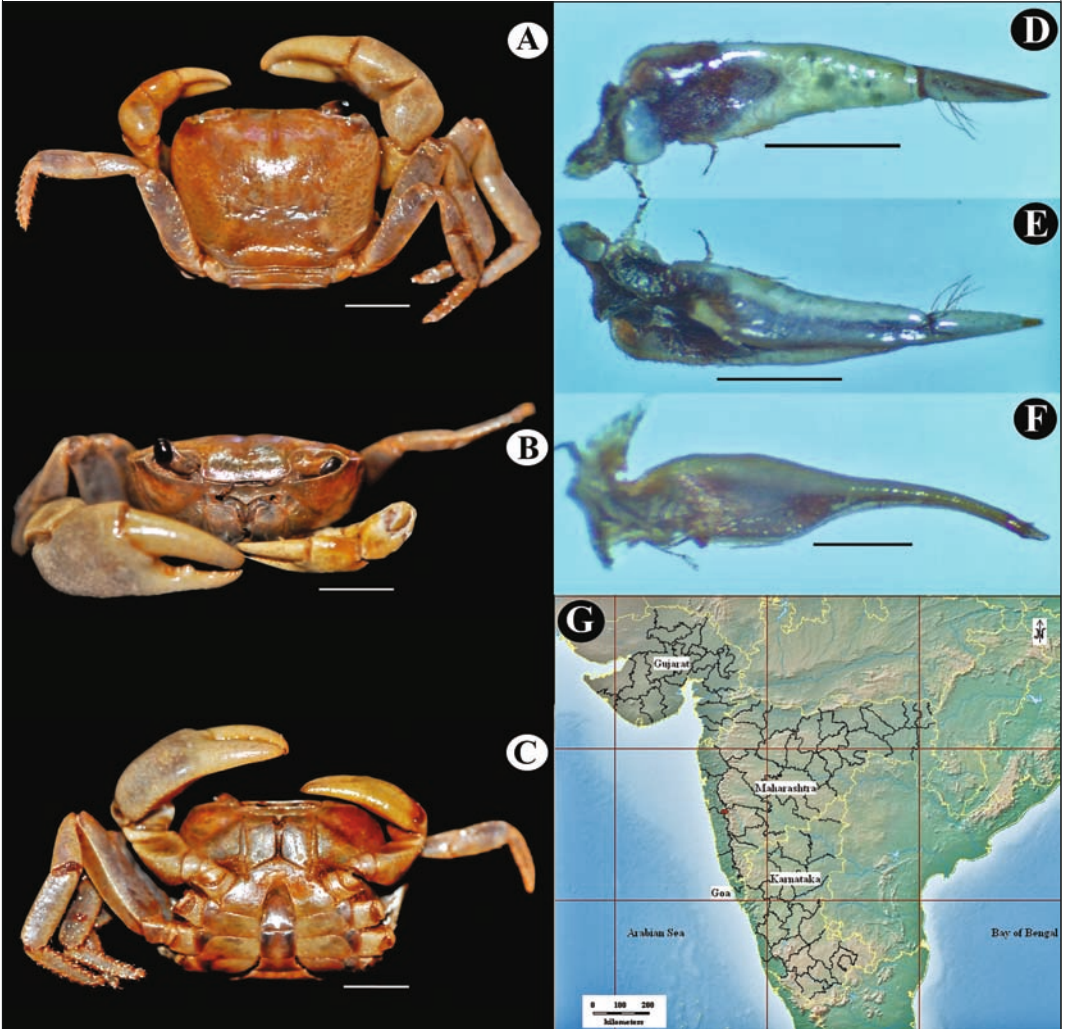
F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - VII

*Gubernatoriana gubernatoris* (Alcock, 1909)



**Fig. 7:** *Gubernatoriana gubernatoris* (Alcock, 1909) (ZSI, WRC-C.971).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

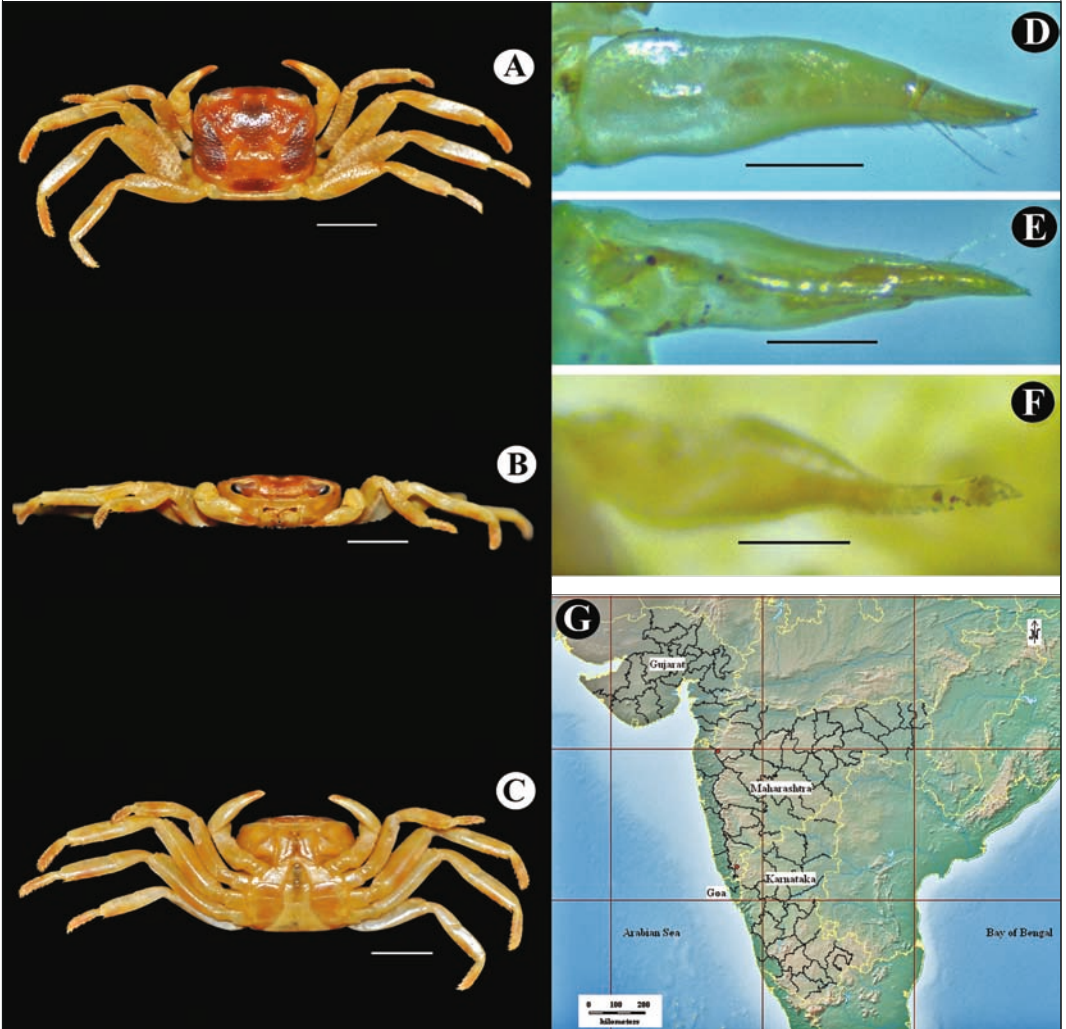
F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - VIII

*Gubernatoriana pilosipes* (Alcock, 1909)



**Fig. 8:** *Gubernatoriana pilosipes* (Alcock, 1909) (ZSI, WRC-C.919).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

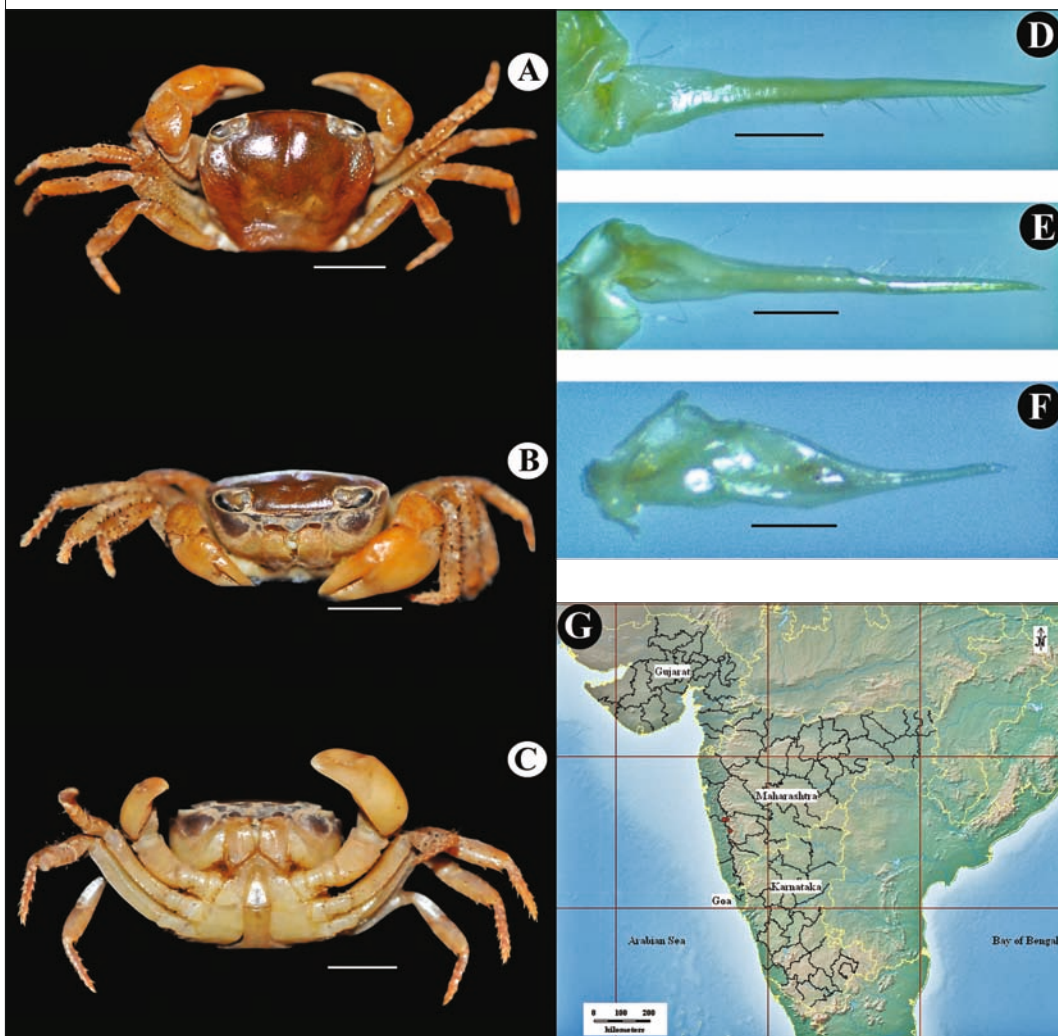
F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - IX

*Inglethelphusa fronto* (Alcock, 1909)



**Fig. 9:** *Inglethelphusa fronto* (Alcock, 1909) (ZSI, WRC-C.412).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

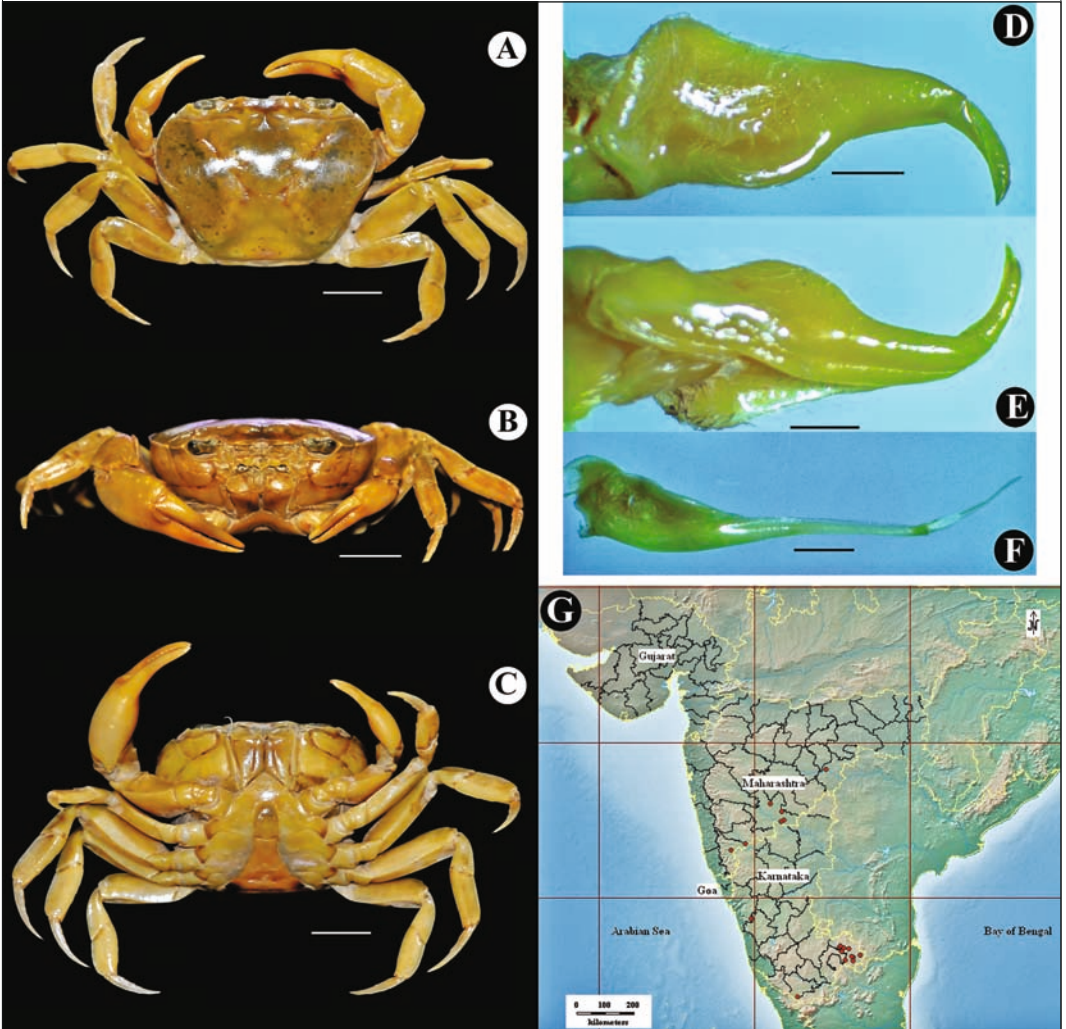
F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - X

*Oziotelphusa wagrakarowensis* (Rathbun, 1904)



**Fig. 10:** *Oziotelphusa wagrakarowensis* (Rathbun, 1904) (ZSI, WRC-C.521).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

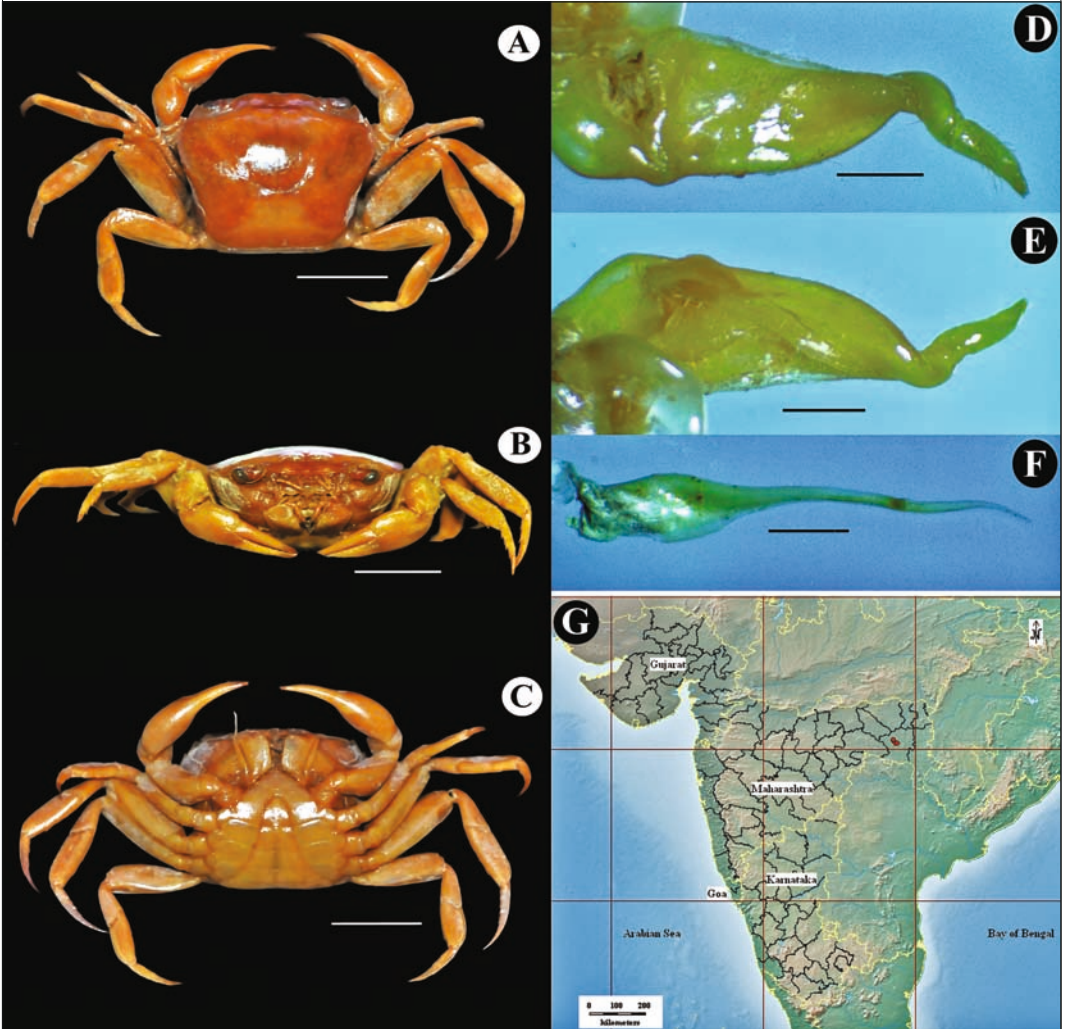
F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

Plate - XI

*Spiralothelphusa hydrodroma* (Herbst, 1794)



**Fig. 11:** *Spiralothelphusa hydrodroma* (Herbst, 1794) (ZSI, WRC-C.523).

A, dorsal view; B, frontal view; C, ventral view;

D, dorsal view of right G1;

E, ventral view of right G1;

F, right G2;

G, distribution of presently studied specimens (red circles).

Scale bar = 10mm (Fig. A–C); 1mm (Fig. D–F).

