



**ON A COLLECTION OF AQUATIC BEETLES  
(COLEOPTERA: GYRINIDAE, HALIPLIDAE, NOTERIDAE,  
DYTISCIDAE, HYDROPHILIDAE AND HYDROCHIDAE)  
OF MADHYA PRADESH, INDIA**

DEEPA JAISWAL\*, KAILASH CHANDRA\*\*, C. A. N. RAO\* AND SUJIT KR. GHOSH\*\*

\*Zoological Survey of India, Freshwater Biological Station, Hyderabad- 500 048

\*\*Zoological Survey of India, New Alipore, Kolkata -700053

### INTRODUCTION

The most successful order of the insect, Coleoptera includes 3, 87,100 described species from the whole world representing about 38% of insect species (1,020,007 species) of all the orders (Zhang, 2011). Of these, 40,000 species belong to aquatic beetles pertaining to at least eighteen families. Despite of having multitudes of freshwater aquatic habitats in India, knowledge on these beetles is quite insufficient.

The current knowledge of aquatic beetle fauna of Madhya Pradesh is limited to the works of Vazirani (1977 and 1984) described *Haliphus pruthii*, 1966 and *Haliphus agarwali*, 1984 under family Haliplidae and also reported some more species on Dytiscidae, Gyrinidae and Haliplidae from Madhya Pradesh. Brancucci (1983) described *Laccophilus kaszabi* and *Laccophilus punctatissimus* of family Dytiscidae from Madhya Pradesh. Chandra (2008) reported 17 aquatic species from Madhya Pradesh. Chandra *et al.*, (2010) and Ghosh & Nilsson (2012) reported thirty nine dytiscid species from Madhya Pradesh. So far, 74 aquatic species were known from Madhya Pradesh. The present work is based mainly on the collection made by scientific team of Central Zone Regional Centre, ZSI Jabalpur from different water bodies of Madhya Pradesh. The collection comprises 39 species belonging to 22 genera under

6 families of aquatic beetles. Altogether, a list of 85 aquatic species currently known from Madhya Pradesh state is also appended. Of these, twelve species marked with asterisks are reported for the first time recorded from the state. For current valid names of the taxa, the work on “*The Fauna of India- Gyrinidae and Haliplidae*” by Vazirani (1984), “*World catalogue of the Hydrophilidae & Hydrochidae*” by Andrew E. Z. Short & Martin Fikacek (2011), “*World catalogue of Noteridae*” by A.N. Nilsson (2012) and “*Catalogue of India & adjacent countries of Dytiscidae*” by Ghosh & Nilsson (2012) were followed.

Order COLEOPTERA

I. Family GYRINIDAE

Subfamily ENHYDRINAE

Genus *Dineutus* Macleay, 1825

1825. *Dineutus* Macleay, *Annulosa javanica* ed., 1: 30.

1. *Dineutus (Protodineutus) indicus*  
Aube, 1938

1938. *Dineutus indicus* Aube, *Species coleopteres*, 6: 772.

*Material examined*: Jabalpur, Mahadwari, 04.II.1963 (20exs.), coll. J.S. Bhatti (Reg. No. I513); Khargone, Babulgaon, 19.II.1971 (9exs.), coll. H. Khajuria (Reg. No. I7795-96); Shahdol, Amarkantak, Amanara gourela, 17.IV.1979 (28 exs.), coll. K. R & Party (Reg. No. I12856).

*Distribution*: India (Andhra Pradesh, Assam, Bihar, Kerala, Madhya Pradesh, Maharashtra, Manipur, Odisha, Pondicherry, West Bengal), Pakistan.

Subfamily GYRININAE

Genus *Gyrinus* Geoffroy, 1762

1762. *Gyrinus* Geoffroy, *Hist. Ins. Paris*, 1: 193.

2. *Gyrinus convexiusculus* Macleay, 1871

1762. *Gyrinus convexiusculus* Macleay, *Trans. Ent. Soc. N.S. Wales*, 2: 128.

*Material examined*: Gagai village, 31.IV.1965 (35exs), coll. H. P. Agarwal & Party (Reg. No. I1294); Shahdol, Doodhdhara, Amarkantak, 06.II.1980 (11exs.), coll. P.D. Rane.

*Distribution*: India (Andhra Pradesh, Assam, Bihar, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Odisha, Pondicherry, West Bengal), Sri Lanka.

Subfamily ORECTOCHILINAE

Genus *Orectochilus* Eschscholtz, 1833

1833. *Orectochilus* Eschscholtz, in *Dejean's Catalogue Coleopteres*, ed. II: 59.

3. *Orectochilus (Patrus) discifer*

(Walker, 1859)

1859. *Gyrinus discifer* Walker, *Ann. Mag. Nat. Hist.*, 3(3): 51.

1930. *Orectochilus (Patrus) discifer*: Ochs, *Cat. Ind. Ins.*, pt. 19: 24.

*Material examined*: Hoshangabad, Pachmarhi, Chhoragarh, 02. IV. 1979 (65exs.), coll. P. D. Rane & Party (Reg. No. I12801).

*Distribution*: India (Andhra Pradesh, Bihar, Madhya Pradesh, Maharashtra, West Bengal), Sri Lanka.

4. *Orectochilus (Patrus) semivestitus*

Guerin, 1840

1840. *Orectochilus (Patrus) semivestitus* Guerin, *Revue. zool*, 3: 38.

*Material examined*: Betul, Katawadi, 22. III. 1990 (60exs.), coll. H. S. Sharma (Reg. No. I14192).

*Distribution*: India (Andhra Pradesh, Bihar, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu, West Bengal), Sri Lanka.

II. Family HALIPLIDAE

Genus *Haliplus* Latreille, 1802

1802. *Haliplus* Latreille, *Hist. Nat. Crust. Ins.*, 3: 77.

5. *Haliplus (Liaphlus) angustifrons*

Regimbart, 1892

1892. *Haliplus angustifrons* Regimbart, *Ann. Soc. Ent. Belg.*, 36: 112.

*Material examined*: Jabalpur, Bheraghat, 02.IV.1966 (2exs.), coll. H. S. Sharma (Reg. No. I2828); Panagar tank, Katni road, 27.IX.1968 (175exs.), coll. V. S. Durve (Reg. No. I5205).

*Distribution*: India (Bihar, Karnataka, Kerala, Madhya Pradesh, Manipur, Punjab, Rajasthan, Tamil Nadu, Tripura, West Bengal), China, Indonesia, Nepal, Philippines, Sri Lanka.

6. *Haliplus (Liaphlus) pulchellus indicus*

Regimbart, 1899

1899. *Haliplus pulchellus var.indicus* Regimbart, *Ann. Soc. ent. Fr.*, 68: 188.

1955. *Haliplus (Liaphlus) pulchellus*: Guignot, *Mem. Soc. R. ent. Belg.*, 27: 295.

1966. *Haliplus (Liaphlus) pulchellus indicus*: Vazirani, *Proc. Zool. Soc. Calcutta*, 19: 133.

*Material examined*: Mandla, Kanha National Park, 29.IV.1964 (15exs.), coll. H. Khajuria (Reg. No. I5580); Lamehta ghat, 03.IV.1968 (4exs.), coll. H.P. Agarwal & Party (Reg. No. I4875); Lamehta ghat, 03.IV.1968 (2exs.), coll. H.P. Agarwal & Party (Reg. No. I4876).

*Distribution*: India (Bihar, Madhya Pradesh, Odisha, Rajasthan, West Bengal) China, Indonesia, Nepal, Philippines and Sri Lanka.

III. Family NOTERIDAE

Subfamily NOTERINAE

Tribe *Neohydrocoptini*

Genus *Neohydrocoptus* Sato, 1972

1859. *Hydrocoptus* Motschulsky: *Etud. Entom.* 8: 43.

1972. *Neohydrocoptus* Sato, *Ann. Hist. Natu. Mus. Nat. Hung.*, 64: 144.

1989. *Neohydrocoptus*: Nilsson et al, N. Stat, *Entomologica Scandinavica* **20**: 313.

**7. *Neohydrocoptus subvittulus***  
(Motschulsky, 1859)

1859. *Hydrocoptus subvittulus* Motschulsky, *Etud. Entom.*, **8**: 43.
2012. *Neohydrocoptus subvittulus* (Motschulsky): Nilsson, A. *World Catalogue of the Family Noteridae, Version* 16.VIII.2011, p. 8.

*Material examined*: Jabalpur, Budhagar, 16.VI.1971 (1ex.), H.S. Sharma & Party (Reg. No. I801); Budhagar, 27.IV.1974 (1ex.), coll. D.S. Mathur (Reg. No. I9870); Bheraghat Nala, Murakhad village, 16.I.1975 (1ex.), coll. S.K. Mishra (Reg. No. I10493); Shahdol, Amarkantak, 19.II.1980 (12exs.), coll. P.D. Rane & Party.

*Distribution*: India (Andhra Pradesh, Assam, Bihar, Kerala, Madhya Pradesh, Odisha, Punjab, Rajasthan, Uttar Pradesh, West Bengal), Sri Lanka, China.

**Tribe Noterini**

**Genus *Canthydrus* Sharp, 1882**

1882. *Canthydrus* Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 269.

**8. *Canthydrus angularis* Sharp, 1882**

1882. *Canthydrus angularis* Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 277.
1977. *Canthydrus morsbachi* (Wehncke): Vazirani, *Rec. zool. Surv. India*, Occ. paper No. **6**: 7.
2012. *Canthydrus angularis* Sharp: Nilsson, A. *World Catalogue of the Family Noteridae, Version* 16. VIII. 2011, p. 9.

*Material examined*: Jabalpur, (Reg. No. I4839), Baleha Tank, Katni Road, 04.III.1968 (1ex.); Budhagar, 30.VII.1969 (6exs.), coll. H. S. Sharma & Party; Narmada River, 17.III.1970 (1ex), coll. V.V. Rao & Party; PANNA, 19.XI.1988 (6exs.), coll. P.D. Rane & Party; Shankh river, Noorabad, 06.I.1995 (4exs), coll. H. S. Sharma & Party.

*Distribution*: India (Andhra Pradesh, Goa, Kerala, Madhya Pradesh, Odisha, West Bengal), Africa, Myanmar, Indonesia and Thailand.

**9. *Canthydrus laetabilis* (Walker, 1858)**

1858. *Hydroporus laetabilis* Walker, *Ann. Mag. Nat. Hist.*, **3**(2): 205.
2012. *Canthydrus laetabilis* (Walker): Nilsson, A. *World Catalogue of the Family Noteridae, Version* 16. VIII. 2011, p. 13.

*Material examined*: Jabalpur, Katni Road, Baleha Tank, 30.XII.1969 (4exs.); 08.VII.1970 (3exs.), coll. H. P. Agarwal & Party, 19.II.1970 (3exs.), coll. V. V. Rao & Party; Budhagar, 07.IV.1971 (5exs.), coll. H. S. Sharma & Party; 21.II.1975 (2exs.), coll. S. Mathur & Party; SHIVPURI, 22.III.1980 (3exs.), coll. D. K. Harshey; TIKAMGARH, 17.III.1994 (1ex.), coll. U. A. Gajbe & Party.

*Distribution*: India (Andhra Pradesh, Assam, Bihar, Kerala, Madhya Pradesh, Odisha, Punjab, Rajasthan, Uttar Pradesh, West Bengal), Philippines, Sri Lanka.

**10. *Canthydrus ritsemae* (Regimbart, 1880)**

1880. *Hydrocanthydrus ritsemae* Regimbart, 1880: *Notes Leyden Mus.*, **2**: 213.
1899. *Canthydrus ritsemae* Regimbart: *Ann. Soc. ent. Fr.*, **68**: 252.

*Material examined*: Jabalpur, Shahpura Rly. Bridge, 10.IV.1968 (1ex.), coll. V.S. Durve (Reg. No. I4998); Narmada River, 17.III.1970 (17exs), coll. V.V. Rao & Party (Reg. No. I6433); Tank, Chatarpur village, 15.VI.1970 (1ex.), coll. H.P. Agarwal & Party (Reg. No. I6633); Amkhas, Nagpur road, 25.VI.1970 (1ex.), coll. H.P. Agarwal & Party.

*Distribution*: India (Andhra Pradesh, Assam, Bihar, Madhya Pradesh, Odisha, West Bengal), Thailand, Indonesia, Myanmar, Singapore, Vietnam.

**IV. Family DYTISCIDAE**

**Subfamily DYTISCINAE**

**Tribe Aciliini**

**Genus *Rhantaticus* Sharp, 1882**

1882. *Rhantaticus* Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 691.

2012. *Rhantaticus* Sharp: Ghosh & Nilsson, *Skorvnoopparn supplement*, 3: 18.

#### 11. *Rhantaticus congestus* (Klug, 1833)

1833. *Hydaticus congestus* Klug: *Symb. Physicae, Insectes Madagascar*, p. 48.

2012. *Rhantaticus congestus*: Ghosh & Nilsson, *Skorvnoopparn supplement*, 3: 18.

*Material examined*: Jabalpur, Ranital, 18.V.1966 (5exs), coll. V.V. Rao (Reg. No. I2681); Katni road, Heron River, 05.X.1966 (1ex.), coll. V.S. Durve (Reg. No. I3138); Chikhaldia, Badgaon, 16.II.1971 (1ex.), coll. D.K. Ghoshal (Reg. No. I7698); SHIVPURI, Shivpuri N. P., 27.III.1980 (9exs.), coll. D. K. Harshey (Reg. No. I13075); 29.III.1980 (25exs.) (Reg. No. I13079).

*Distribution*: India (Andhra Pradesh, Arunachal Pradesh, Delhi, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Odisha, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal), Bangladesh, Nepal, China, Japan, Philippines, Saudi Arabia, Sunda Islands, Taiwan, Madagascar, North Africa, Afrotropical region, Australian region.

#### Genus *Sandracottus* Sharp, 1882

1882. *Sandracottus* Sharp, *Sci. Trans. R. Dublin Soc.*, 2: 672.

2012. *Sandracottus* Sharp: Ghosh & Nilsson, *Skorvnoopparn supplement* 3: 18.

#### 12. *Sandracottus dejeani* (Aube, 1838)

1838. *Hydaticus dejeani* Aube: *In Dejeans species Coleopteres*, 6: 165.

2012. *Sandracottus dejeani*: Ghosh & Nilsson, *Skorvnoopparn supplement* 3: 18.

*Material examined*: Jabalpur, Budhagar, 27.V.1969 (1ex.), coll. V.S. Durve (Reg. No. I5626); Baleha Tank, 12.IV.1970 (2exs.), coll. H. Khajuria (Reg. No. I6612); Chikhaldia, Badgaon, 16.II.1971 (3exs.), coll. D.K. Ghoshal (Reg. No. I770-I773); Piparia, Kundum road, 18.IV.1983 (14exs.), coll. S.K. Misra (Reg. No. I13027).

*Distribution*: India (Arunachal Pradesh, Andhra Pradesh, Gujarat, Himachal Pradesh,

Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal), Pakistan, Iran, Afrotropical region, Australian region.

#### 13. *Sandracottus mixtus* (Blanchard, 1843)

1843. *Hydaticus mixtus* Blanchard, *Insectes coleopteres*, 4.

2012. *Sandracottus mixtus*: Ghosh & Nilsson, *Skorvnoopparn supplement*, 3: 19.

*Material examined*: Jabalpur, Amkhas, 11.VII.1975 (1ex.), coll. P.D. Rane (Reg. No. I10759); Budhagar, 2.XII.1975 (15 exs.), coll. D.S. Mathur (Reg. No. I11839); 28.II.1976, (6exs.) (Reg. No. I11896); Hoshangabad, 12.I.1990 (13exs.), coll. U.A. Gajbe (Reg. No. I14162); Mandla, Deotari, 15.VI.1992 (4exs.), coll. U.A. Gajbe (Reg. No. I15114).

*Distribution*: India (Andhra Pradesh, Madhya Pradesh, Nagaland, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal), Myanmar, China, Indonesia, Japan and Vietnam.

#### Tribe *Cybistrini*

#### Genus *Cybister* Curtis, 1827

1827. *Cybister* Curtis, *Brit. Entom. Lond.*, 4: 151.

2012. *Cybister* Curtis: Ghosh & Nilsson, *Skorvnoopparn supplement*, 3: 19.

#### 14. *Cybister (Cybister) pectoralis* Sharp, 1882

1882. *Cybister pectoralis* Sharp, *Sci. Trans. R. Dublin Soc.*, 2: 736.

1977. *Cybister (Melanectes) pectoralis*: Vazirani, *Rec. zool. Surv. India, Occ. Paper No.* 6: 91.

2012. *Cybister (Cybister) pectoralis*: Ghosh & Nilsson, *Skorvnoopparn supplement*, 3: 21.

*Material examined*: Jabalpur, Amkhas, Nagpur road, 15.OI.1976 (6exs.), coll. B.S. Guram (Reg. No. I11861); Bidia River, 15.X.1986 (12exs.), coll. D.S. Mathur (Reg. No. I13534); Damoh, 18.OI.1994 (5exs), coll. H.P. Agarwal & Party (Reg. No. I15749); Tikamgarh, Kundeswar, Jamini, 19.III.1994 (1ex.), coll. U.A. Gajbe (Reg. No. I15922).

*Distribution*: India (Andhra Pradesh, Bihar, Madhya Pradesh, Maharashtra, West Bengal).



15. *Cybister (Cybister) tripunctatus lateralis*  
(Fabricius, 1798)

1795. *Cybister tripunctatus* Olivier, *Entom. Hist. nat. Ins.*, **3**: 14.  
1798. *Dytiscus lateralis* Fabricius, *Suppl. Entom. Syst.*, p. 64.  
1832. *Cybister asiaticus* Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 731.  
1977. *Cybister tripunctatus asiaticus*: Vazirani, *Rec. zool. Surv. India, Occ. Paper No.* **6**: 62.  
2012. *Cybister (Cybister) tripunctatus lateralis*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 21.

*Material examined*: Jabalpur, Gwarighat, 19.VII.1966 (1ex.), coll. H.P. Agarwal & Party (Reg. No. I2894); Jabalpur, 10.II.1971 (3exs.), coll. V.V. Rao (Reg. No. I7541-7543); Lamehtaghat, 08.IV.1974 (23exs.), coll. H. Khajuria (Reg. No. I9855); Pariat River, Katni road, 02.VIII.1975 (2exs.), coll. H. Khajuria; Mohania village, 29.X.1975 (2exs.), coll. H.P. Agarwal & Party (Reg. No. I11765).

*Distribution*: India (Andaman & Nicobar Islands, Andhra Pradesh, Assam, Delhi, Gujarat, Himachal Pradesh, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal), Afghanistan, Bangladesh, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, China, Cyprus, Iran, Iraq, Japan, Kyrgyzstan, Mongolia, Russia, Syria, Tajikistan, Turkmenistan, Turkey, Uzbekistan, Europe.

16. *Cybister (Melanectes) convexus* Sharp, 1882

1882. *Cybister convexus* Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 718.  
1945. *Cybister (Melanectes) convexus*: Brinck, *Kung. Fysiog. Salls. Handl.*, **56**(4): 11.

*Material examined*: Jabalpur, Puri Village, 16.IV.1964 (16exs.), coll. H.P. Agarwal & Party (Reg. No. I485); Lamehta ghat, 08.IV.1974 (5exs.), coll. H. Khajuria (Reg. No. I9848); Adhartal, 03.IX.1975 (6exs.), coll. H. Khajuria (Reg. No. I10835); Budhagar, 23.XI.1976 (2exs.), coll. D.S. Mathur (Reg. No. I12215).

*Distribution*: India (Andhra Pradesh, Assam, Madhya Pradesh, Manipur, Meghalaya, Sikkim, Uttar Pradesh, West Bengal), China.

Tribe **Eretini**

Genus *Eretes* Laporte, 1833

1833. *Eretes* Laporte, *Ann. Soc. Entom. France*, **1**: 397.  
2012. *Eretes* Laporte: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 23.

17. *Eretes griseus* (Fabricius, 1781)

1781. *Dytiscus griseus* Fabricius, *Species Ins.*, **1**: 293.  
2012. *Eretes griseus*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 23.

*Material examined*: Shahdol, Bandhavgarh N.P., 26.II.1976 (12exs.), coll. N.K. Sinha (Reg. No. I12020); Jabalpur, Patan River, Pavai, 20.II.1987 (60exs.), coll. R.K. Singh & party (Reg. No. I13690); Morena, Deori, Kuanari River, 05.OI.1995, (11exs) (Reg. No. 630913).

*Distribution*: India (Himachal Pradesh, Jammu & Kashmir, Uttar Pradesh), Afghanistan, Bhutan, Nepal, Pakistan, China, Iran, Iraq, Japan, Kuwait, Oman, Sinai, South Korea, Syria, Turkey, Yemen, Afrotropical region, Australian region, Russia, Europe, North Africa.

Tribe **Hydaticini**

Genus *Hydaticus* Leach, 1817

1817. *Hydaticus* Leach, *zool. Miscell.* **3**: 69.  
2012. *Hydaticus* Leach: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 24.

18. *Hydaticus (Prodaticus) ricinus*

Wewalka, 1979

1979. *Hydaticus ricinus* Wewalka, *Koleopterologische Rundschau*, **54**: 128.  
2012. *Hydaticus (Prodaticus) ricinus*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 27.

*Material examined*: Jabalpur, Baleha Tank, 12.IV.1970 (2exs.), coll. H.P. Agarwal & Party (Reg. No. I6610); Balsagar tank, Nagpur road, 23.VI.1970 (3exs.), coll. H.S. Sharma (Reg. No. I6665); Gangli Village, 10.II.1971 (60exs.), coll. V.V. Rao (Reg. No. I7538); Budhagar tank, 31.VIII.1975 (2exs.), coll. H.P. Agarwal

& Party (Reg. No. I10774); Budhagar tank, 23.OI.1976 (10exs.), coll. D.S. Mathur (Reg. No. I11874); 28.II.1976 (5exs.) (Reg. No. I11895); KHARGONE, Narmada River, Bogad, 13.II.1971 (3exs.), coll. V.V. Rao (Reg. No. I7588); MANDLA, Supkhar, Kanha N.P., 01.XII.1984 (1ex.), coll. D.S. Mathur (Reg. No. I13400).

*Distribution:* India: (Assam, Madhya Pradesh, Tamil Nadu), Afghanistan, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, China, Laos, Thailand, Vietnam.

*Remarks:* This species is recorded for the first time from Madhya Pradesh.

19. *Hydaticus (Prodaticus) vittatus vittatus*  
(Fabricius, 1775)

1775. *Dytiscus vittatus* Fabricius, *Syst. Ent.*: 825.

1975. *Hydaticus vittatus vittatus*: Wewalka, *Koleopterologische Rundschau*, **52**: 87.

2012. *Hydaticus (Prodaticus) vittatus vittatus*: Ghosh & Nilsson, *Skorvnopparn supplement* **3**: 27.

*Material examined:* Jabalpur, Budhagar, 21.XI.1974 (4exs.), coll. D.S. Mathur (Reg. No. I10309); 1ex. Budhagar, 17.V.1977, coll. D.S. Mathur (Reg. No. I12221); Shahdol, Bijuria, 23.II.1976 (1ex.), coll. N.K. Sinha (Reg. No. I11895).

*Distribution:* India (Andhra Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Pondicherry, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal), Bangladesh, Bhutan, Myanmar, Nepal (Danda Pakhar, Godavari), Pakistan, Sri Lanka, China, Indonesia, Japan, Korea, Philippines, Taiwan, Thailand, Vietnam, Australian region.

Subfamily HYDROPORINAE

Tribe BIDESSINI

Genus *Hydroglyphus* Motschulsky, 1853

1853. *Hydroglyphus* Motschulsky, *Imprimerie de la Societe de Literature Finnoise*, p. 5.

1945. *Guignotus*: Guignot, *Mem. Mus. Natn. Hist. nat.*, **19**: 226.

2012. *Hydroglyphus*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 29

20. *Hydroglyphus flammulatus* (Sharp, 1882)

1882. *Bidessus flammulatus* Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 359.

2012. *Hydroglyphus flammulatus*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 29.

*Material examined:* Jabalpur, Narmada River, Tilwaraghat, 07.V.1969 (1ex.), coll. V.V. Rao & Party (Reg. No. I5600); Left bank of Narmada River, 16.XI.1969 (4exs.), coll. V.V. Rao & Party (Reg. No. I7587); Narmada River, 17.III.1970 (7exs.), coll. V.V. Rao & Party (Reg. No. I 6434); SHAHDOL, Amarkantak, 12.VI.1970 (28exs.), coll. P.D. Rane & Party; Baleha Tank, Katni Road, 13.II.1971 (7exs.), coll. H.P. Agarwal & Party (Reg. No. I6609); Narmada River, Tilwaraghat, 12.III.1992 (1ex.), coll. V.V. Rao & Party (Reg. No. I14991).

*Distribution:* India (Himachal Pradesh, Madhya Pradesh, Rajasthan, Sikkim, Uttarakhand), Afghanistan, Bhutan, Nepal, Pakistan, China, Cyprus, Iran, Iraq, Israel, Kazakhstan, Kyrgyzstan, Lebanon, Mongolia, North Korea, Saudi Arabia, Syria, Tajikistan, Turkey, Turkmenistan, Uzbekistan, Vietnam, Russia, Europe and North Africa.

21. *Hydroglyphus inconstans*  
(Regimbart, 1892)

1892. *Bidessus inconstans* Regimbart, *Ann. Soc. Ent. Fr.*, **36**: 119.

2012. *Hydroglyphus inconstans*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 30.

*Material examined:* Jabalpur, Garudeshwar, 12.V.1966 (1ex.), coll. H.P. Agarwal & Party (Reg. No. I2698); Tilwaraghat, 04.V.1968 (2exs.), coll. H.S. Sharma (Reg. No. I2673); Narmada River, 17.III.1970 (1ex.), coll. V.V. Rao & Party (Reg. No. I6435); Katangi Road, 08.II.1980 (2exs.), coll. H.P. Agarwal & Party (Reg. No. I4973); Hoshangabad, Pachmarhi, Chhoragarh, 02.IV.1979 (8exs.), coll. K. Ghoshal & Party (Reg. No. I8554).

*Distribution:* India (Andaman & Nicobar Islands, Andhra Pradesh, Assam, Goa, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Odisha, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, West Bengal), Bangladesh, Bhutan, Myanmar, Nepal, Sri Lanka, China, Indonesia, Japan, Malaysia, Taiwan.

22. *Hydroglyphus pendjabensis* (Guignot, 1954)

1954. *Guignotus pendjabensis* Guignot, *Opusc. Ent. Lund.*, **19**: 221.

2012. *Hydroglyphus pendjabensis*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 31.

*Material examined:* Jabalpur, Gwarighat, 23.IV.1966 (1ex.), coll. H.P. Agarwal & Party (Reg. No. I12802); Narmada River, Tilwaraghat, 07.V.1969 (1ex.), coll. V.V. Rao & Party (Reg. No. I5601); Tilwaraghat, 17.III.1970 (1ex.), coll. H.K. Khajuria (Reg. No. I 2646); Narmada River, 17.III.1970 (1ex.), coll. V.V. Rao & Party (Reg. No. I 6436); SHAHDOL DIST, 08.III.1976 (4exs.), coll. N.K. Sinha (Reg. No. I12121).

*Distribution:* India (Andhra Pradesh, Delhi, Goa, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal), Bangladesh, Myanmar, Nepal, Pakistan.

Tribe **Hydrovatini**

Genus *Hydrovatus* Motschulsky, 1853

1853. *Hydrovatus* Motschulsky: *Imprimerie de la Societe de Literature Finnoise*, p. 4.

2012. *Hydrovatus* Motschulsky: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 37.

23. *Hydrovatus confertus* Sharp, 1882

1882. *Hydrovatus confertus* Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 329.

2012. *Hydrovatus confertus*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 37.

*Material examined:* Shahdol, Amarkantak, 19.V.1966 (1ex.), coll. H.P. Agarwal & Party (Reg. No. I2688); Jabalpur, Narmada River, Tilwaraghat, 07.V.1969 (6exs.), coll. V.V. Rao & Party (Reg. No. I5599); Tikamgarh, 19.IX.1993

(10exs.), coll. R.K. Singh & Party (Reg. No. I 15416).

*Distribution:* India (Andaman & Nicobar Islands, Assam, Delhi, Jharkhand, Kerala, Madhya Pradesh, Manipur, Pondicherry, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal), Bangladesh, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, Cambodia, China, Indonesia, Laos, Malaysia, Thailand, Vietnam.

*Remarks:* This species is recorded for the first time from Madhya Pradesh.

Subfamily LACCOPHILINAE

Genus *Laccophilus* Leach, 1815

1815. *Laccophilus* Leach, *The Edinburgh encyclopaedia*, **9**(1): 84.

2012. *Laccophilus* Leach: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 46.

24. *Laccophilus elegans* Sharp, 1882

1882. *Laccophilus elegans* Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 302.

2012. *Laccophilus elegans*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 47.

*Material examined:* Jabalpur, Amkhas, Nagpur road, 19.X.1968 (11exs.), coll. H.P. Agarwal & Party; Narmada River, 31.X.1969 (1ex.), coll. H. Khajuria (Reg. No. I5993); MANDSAUR, Mahargarh, 14.VIII.1990 (1ex.), coll. R.K. Singh (Reg. No. I14380); Tikamgarh, 18.III.1994 (5exs.), coll. U.A. Gajbe (Reg. No. I15915).

*Distribution:* India (Andaman & Nicobar Islands, Andhra Pradesh, Bihar, Chhattisgarh, Karnataka, Madhya Pradesh, Nagaland, Odisha, West Bengal), Vietnam.

*Remarks:* This species is recorded for the first time from Madhya Pradesh.

25. *Laccophilus ellipticus* Regimbart, 1889

1889. *Laccophilus ellipticus* Regimbart, *Ann. Soc. Ent. Fr.*, **(6) 9**: 152.

2012. *Laccophilus ellipticus*: Ghosh & Nilsson, *Skorvnopparn supplement*, **3**: 47.

*Material examined:* Jabalpur, Baleha Tank, 12.VI.1970 (2exs.), coll. H. Khajuria (Reg. No.

I6613); Tamar River, Bargi road, 26.VI.1972 (5exs.), coll. R.K. Singh & party (Reg. No. I9131); Shahdol, Bandhavgarh, 05.III.1976 (3exs.), coll. N.K. Sinha (Reg. No. I12095).

*Distribution:* India (Andhra Pradesh, Assam, Bihar, Goa, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Meghalaya, Odisha, Pondicherry, Tamil Nadu, West Bengal), Myanmar, Sri Lanka, China, Cambodia, Indonesia, Thailand, Vietnam.

26. *Laccophilus inefficiens* (Walker, 1859)

1859. *Hydroporus inefficiens* Walker, *Ann. Mag. Nat. Hist.*, **3**: 51.

2012. *Laccophilus inefficiens*: Ghosh & Nilsson, *Skorvopparn supplement 3*: 49.

*Material examined:* Ratlam, Ratlam stn, 23.VIII.1990 (3exs.), coll. R.K. Singh & party (Reg. No. I14450); Chindwara, Gayani River stn, Patalkot, 28.II.1994 (2exs.), coll. H.S. Sharma (Reg. No. I15848).

*Distribution:* India (Andaman & Nicobar Islands, Andhra Pradesh, Assam, Bihar, Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Punjab, Rajasthan, Sikkim, Tripura, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal), Bangladesh, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, Indonesia, Iran and Malaysia.

27. *Laccophilus uniformis* Motschulsky, 1859

1859. *Laccophilus uniformis* Motschulsky, *Etudes Entom.*, **8**: 46.

2012. *Laccophilus uniformis*: Ghosh & Nilsson, *Skorvopparn supplement, 3*: 52.

*Material examined:* Jabalpur, Heron River at katangi village, 15.VI.1966 (3exs.), coll. H.S. Sharma (Reg. No. I 2768); Budhagar tank on Katni road, 30.VII.1969 (5exs.), coll. H.S. Sharma (Reg. No. I5731); Amkhas, 22.X.1974 (3exs.), coll. B.S. Guram (Reg. No. I2272); Khandu, Kukru, 30.III.1990 (18exs.), coll. H.S. Sharma (Reg. No. I14241).

*Distribution:* India (Andaman & Nicobar Is., Andhra Pradesh, Assam, Bihar, Chhattisgarh,

Delhi, Madhya Pradesh, Manipur, Odisha, Sikkim, West Bengal), Bangladesh, Myanmar, Sri Lanka, Cambodia, China, Indonesia, Laos, Thailand and Vietnam.

V. Family HYDROPHILIDAE

Subfamily HYDROPHILINAE

Tribe **Hydrophilini**

Genus *Hydrophilus* Muller, 1764

1764. *Hydrophilus* Muller, *Fauna Ins. Fridrichsdalina*, p. 16.

28. *Hydrophilus olivaceus* Fabricius, 1781

1781. *Hydrophilus olivaceus* Fabricius, *Spec. ins.*, **1**: 289.

*Material examined:* Jabalpur, Baleha Tank, Panagar village, 08.OI.1969 (5exs.), coll. H.P. Agarwal & Party (Reg. No. I5359); Budhagar, 24.IV.1969 (5exs.), coll. H.P. Agarwal & Party (Reg. No. 5582); Pariat nala, 15.OI.1970 (2exs.), coll. H.S. Sharma & Party (Reg. No. I6326); Budhagar, 26.X.1976 (2exs.), coll. K. Reddaiah (Reg. No. I12193).

*Distribution:* India (Andhra Pradesh, Madhya Pradesh, Maharashtra, Manipur, West Bengal).

Tribe **Berosini**

Genus *Berosus* Leach, 1817

1817. *Berosus* Leach, *Zool. Misc.*, **3**: 92.

29. *Berosus indicus* Motschulsky, 1861

1861. *Berosus indicus* Motschulsky, *Bull. Soc. Imp. Nat. Moscou*, **34** (1): 110.

*Material examined:* Jabalpur, Bheraghat, 23.IV.1970 (4exs.), coll. H.P. Agarwal & Party (Reg. No. I6528); Amkhas, 19.IV.1975 (2exs.), coll. B.S. Guram (Reg. No. I10394); Budhagar, 23.I.1976 (6exs.), coll. D.S. Mathur (Reg. No. I11875).

*Distribution:* India (Bihar, Karnataka, Kerala, Madhya Pradesh, Manipur, Punjab, Rajasthan, Tamil Nadu, Tripura, West Bengal), China, Indonesia, Nepal, Philippines, Sri Lanka.

30. *Berosus pulchellus* Macleay, 1817

1817. *Berosus pulchellus* Macleay, *Annul. Jav.*, **35**.



1995. *Berosus pulchellus* Macleay: Biswas & Mukhopadhyay, *Fauna of West Bengal, State Fauna Series.*, 3(6 A): 163.

*Material:* Jabalpur, Richhai village, 13.IV.1966 (13exs.), coll. H.P. Agarwal & Party (Reg. No. I2589); Piparia village, 18.IV.1983 (4exs.), coll. S.K. Misra (Reg. No. I13028); KHARGONE, Bogad, 13.II.1971 (4exs.), coll. V.V. Rao (Reg. No. I7591);

*Distribution:* India (Andhra Pradesh, Delhi, Haryana, Karnataka, Kerala, Madhya Pradesh, Meghalaya, Rajasthan, Tamil Nadu, Tripura, West Bengal), China, Hongkong, Indonesia, Japan, Malaysia, Nepal, Philippines, Sri Lanka, Taiwan.

*Remarks:* This species is recorded for the first time from Madhya Pradesh.

#### Genus *Regimbartia* Zaitzev, 1908

1908. *Regimbartia* Zaitzev, *Horae Soc. Ent. Ross.*, **38**: 362.

#### 31. *Regimbertia attenuata* (Fabricius, 1801)

1801. *Hydrophilus attenuata* Fabricius, *Syst. Eleuth.*, **1**: 253.

1924. *Regimbartia attenuata*: Kinsch, *Col. Cat.*, **14**(79): 276.

*Material:* Jabalpur, Shahpura Rly. Bridge, 10.V.1968 (1ex.), coll. V.S. Durve (Reg. No. I5002); Budhagar, 14.IV.1970 (1ex.), coll. V.V. Rao (Reg. No. II6493); 12.V.1970 (4exs.), (Reg. No. I6494); 06.X.1972 (1ex.), coll. D.S. Mathur (Reg. No. I9260); 26.X.1976 (4exs.), coll. K. Reddiah (Reg. No. I12197); Babul gaon, KHARGONE dist., 04.II.1971 (6exs.), coll. V.V. Rao (Reg. No. I7342); Nagpur road, Amkhas, 02.VI.1971 (4exs.), coll. D.K. Ghoshal (Reg. No. I7999); Bhadaya Kund road, 26. III.1980 (1ex.), coll. D.K. Harshey (Reg. No. I13068).

*Distribution:* India (Andhra Pradesh, Madhya Pradesh, Maharashtra, Manipur, West Bengal), Australia, Japan, Sri Lanka, South Asia.

*Remarks:* This species is recorded for the first time from Madhya Pradesh.

#### Tribe ACIDOCERINI

#### Genus *Enochrus* Thomson, 1859

#### 32. *Enochrus esuriens* (Walker, 1858)

1858. *Philiphydrus esuriens* Walker, *Ann. Mag. Nat. Hist.*, (32) **2**: 209.

1924. *Enochrus esuriens*: Kinsch, *Col. Cat.*, **14**(79): 209.

*Material:* Jabalpur, Lameta ghat, 11.OI.1967 (5exs.), coll. V.S. Durve (Reg. No. I3406); Bargi village, 24.VII.1970 (2exs.), coll. H.P. Agarwal & Party (Reg. No. I6750); Mortakka village, 09.X.1969 (1ex.), coll. H. Khajuria (Reg. No. I5972); Narila village, 26.X.1975 (2exs.), coll. H.P. Agarwal & Party (Reg. No. I11698).

*Distribution:* India (Madhya Pradesh, Manipur, Andaman & Nicobar Is., West Bengal), Australia, Indonesia, Philippines, Sri Lanka.

*Remarks:* This species is recorded for the first time from Madhya Pradesh.

#### Genus *Helochares* Mulsant, 1844

1844. *Helochares* Mulsant, *Hist. Nat. Col. Fr. Palp.*, p. 197.

#### 33. *Helochares ancholaris* Sharp, 1890

1890. *Helochares ancolaris* Sharp, *Trans. Ent. Soc. Lond.*, **352**.

*Material:* Jabalpur, Heron River, 12.V.1966 (2exs.), coll. H.S. Sharma (Reg. No. I2671); Supatal, Nagpur road, 15.IV.1968 (1ex.), coll. H.P. Agarwal & Party (Reg. No. I4921); Tilwaraghat, 12.II.1970 (1ex.), coll. H.P. Agarwal & Party (Reg. No. I6356); KHARGONE, 21.II.1971 (1ex.), coll. H. Khajuria (Reg. No. I7828); Garudeshwar, Narmada River, 22.XII.19710 (2exs.), coll. H. Khajuria (Reg. No. I8457-58); Amkhas, 15.VI.1975 (4exs.), P.D. Rane (Reg. No. I21455); Hasdeo river, 14.XI.1979 (1ex.), coll. K.R. & Party (I12675).

*Distribution:* India (Andhra Pradesh, Bihar, Madhya Pradesh, Maharashtra, West Bengal), Cambodia, Indochina, Indonesia, Philippines, Sri Lanka.

*Remarks:* This species is recorded for the first time from Madhya Pradesh.

34. *Helochares crenatus* Regimbart, 1903

1903. *Helochares crenatus* Regimbart, *Ann. Soc. Ent. Fr.*, **72**: 54.

*Material*: Jabalpur, Madan mahal, 17.II.1967 (3exs.), coll. H. Khajuria (Reg. No. I3569); Baleha Tank, 30.XII.1969 (2exs.), coll. H.P. Agarwal & Party (Reg. No. I5934); Budhagar, 15.VII.1970 (5exs.), coll. H.P. Agarwal & Party (Reg. No. I6721-25); Malwara, 17.II.1971 (11exs.), coll. D.K. Ghoshal (Reg. No. I7742); Madan Mahal, 13.VI.1975 (2exs.), coll. P.D. Rane (Reg. No. I10736).

*Distribution*: India: (Andhra Pradesh, Bihar, Madhya Pradesh, Pondicherry, Tripura, West Bengal), Cambodia, Indonesia and Philippines.

35. *Helochares pallens* (Macleay, 1825)

1825. *Enhydrus pallens* Macleay, *Annual. Javan.* p. 35.

1926. *Helochares pallens*: d' Orchymont, *Ann. Bull. Soc. Ent. Belg.*, **66**: 232.

*Material*: Jabalpur, Bilpathar, Shahpura, 28.OI.1967 (20exs.), coll. V.S. Durve (Reg. No. I3481); Chatarpur village, 15.VI.1970 (15exs.), coll. H.S. Sharma (Reg. No. I6628); Budhagar, 29.OI.1971 (1ex.), coll. H.S. Sharma (Reg. No. I7322); MANDLA, Kanha National Park, 20.III.1979 (31exs.), coll. N.K. Sinha (Reg. No. I12868).

*Distribution*: India (Andhra Pradesh, Assam, Bihar, Madhya Pradesh, West Bengal), Egypt, Indonesia, Madagascar, Philippines, Syria.

*Remarks*: This species is recorded for the first time from Madhya Pradesh.

## Subfamily SPHAERIDIINAE

Genus *Dactylosternum* Wollaston, 1854

1854. *Dactylosternum* Wollaston, *Ins. Mad.* p. 99.

36. *Dactylosternum abdominal* Fabricius, 1792

1792. *Dactylosternum abdominal* Fabricius, *Entom. Syst.* **1**: 98.

1924. *Dactylosternum abdominal*: Knisch, *Col. Cat.*, **14** (79): 115.

*Material*: Jabalpur, Katni road, 14.IV.1970 (3exs.), coll. V.V. Rao (Reg. No. I64994).

*Distribution*: India (Andhra Pradesh, Madhya Pradesh, Manipur, West Bengal), North & South America.

*Remarks*: This species is recorded for the first time from Madhya Pradesh.

Genus *Sphaeridium* Fabricius, 1775

1775. *Sphaeridium* Fabricius, *Syst. Ent.* p. 66.

37. *Sphaeridium dimidiatum* Gory, 1834

1834. *Sphaeridium dimidiatum* Gory, *In Guerin, Icon, regne Anim & Ins*, 73.

1924. *Sphaeridium dimidiatum*: Biswas & Mukhopadhyay, *Fauna of West Bengal, State Fauna Series*, **3**(6 A): 151.

*Material*: Jabalpur, Baleha Tank, Panagar village, 08.OI.1969 (2exs.), coll. H.P. Agarwal & Party (Reg. No. I5359).

*Distribution*: India (Andhra Pradesh, Madhya Pradesh, West Bengal), China, Indonesia, Nepal, Philippines, Sri Lanka.

*Remarks*: This species is recorded for the first time from Madhya Pradesh.

38. *Sphaeridium quinquemaculatum*

Fabricius, 1798

1798. *Sphaeridium quinquemaculatum* Fabricius, *Ent. Syst. Suppl.*, p. 39.

1995. *Sphaeridium quinquemaculatum*: Biswas and Mukhopadhyay, *Fauna of West Bengal, State Fauna Series.*, **3**: (6 A): 151- 152.

*Material*: khargone, Bogad, 12.II.1971 (1ex.), coll. V.V. Rao (Reg. No. I7591).

*Distribution*: India (Bihar, Karnataka, Kerala, Madhya Pradesh, Manipur, Punjab, Rajasthan, Tamil Nadu, Tripura, West Bengal), China, Indonesia, Nepal, Philippines, Sri Lanka.

*Remarks*: This species is recorded for the first time from Madhya Pradesh.

## VI. Family HYDROCHIDAE

Genus *Hydrochus* Leach, 1817

1817. *Hydrochus* Leach, *Zool. Misc.*, III, p. 90.

39. *Hydrochus binodosus* Motschulsky, 1860

1860. *Hydrochus binodosus* Motschulsky, *Schrenka Reis.*, **2**: 104.

1995. *Hydrochus binodosus*: Biswas & Mukhopadhyay, *Fauna of West Bengal, State Fauna Series*, **3**: (6 A): 149.

*Material*: Jabalpur, Lametaghat, 11.0I.1967 (1ex.), coll. V.S. Durve (Reg. No. I3406); Baleha Tank, Panagar village, 08.0I.1969 (5exs.), coll. H.P. Agarwal & Party (Reg. No. I5359).

*Distribution*: India (Assam, Madhya Pradesh, West Bengal), Indonesia, Sri Lanka.

*Remarks*: This species is recorded for the first time from Madhya Pradesh.

## SUMMARY

The study records 39 species of aquatic beetles pertaining to 22 genera and six families namely, Gyrinidae, Haliplidae, Noteridae, Dytiscidae, Hydrophilidae and Hydrochidae. Of these, 12 species are reported for the first time from the state. A list of 85 species of aquatic beetles known from Madhya Pradesh is appended.

## ACKNOWLEDGEMENTS

Authors are grateful to Dr. K. Venkataraman, Director, Zoological Survey of India, for providing necessary facilities and encouragements.

## REFERENCES

- Biswas S. & Mukhopadhyay P. 1995: *Insecta: Coleoptera: Fauna of West Bengal, State Fauna Series*, **3**(6 A): 1-51, Zoological Survey of India, Kolkata.
- Bistrom O. 1997: Taxonomic revision of the genus *Hydrovatus* Motschulsky (Coleoptera, Dytiscidae). *Entomologica Basiliensia*, **19**: 57-584.
- Brancucci M. 1983b: Révision des espèces est-paléarctiques, orientales et australiennes du genre *Laccophilus* (Col. Dytiscidae). *Entomologische Arbeiten aus dem Museum G. Frey*, **31/32**: 241-426.
- Chandra K. 2008: *Faunal Diversity of Jabalpur District, Madhya Pradesh*, Coleoptera: Dytiscidae, Zoological Survey of India, 159-186.
- Chandra K., Sharma R.M. and Ojha, P. 2010: A Compendium on the Faunal Resources of Narmada River Basin in Madhya Pradesh, *Rec. zool. Surv. India, Occ. Paper No.* **310**: 53-55.
- D'Orchymont A. 1928: *Catalogue of Indian Insects*, Part **14**: 1-146. Govt. of India Publication, Hydrophilidae: Coleoptera.
- Ghosh S.K. & Nilsson A.N. 2012: Catalogue of the diving beetles of India and adjacent Countries (Coleoptera: Dytiscidae). *Skorvnopparn Supplement*, **3**: 1-77.
- Knisch A. 1924: *Coleopterorum Catalogus*, (Schenkling edited), **14**(Pars 79), 306 pp.
- Miller K.B. 2002: Revision of the genus *Eretes* Laporte, 1833 (Coleoptera: Dytiscidae). *Aquatic Insects*, **24**(4): 247-272.
- Nilsson A.N. 2012: A World Catalogue of the Family Noteridae. Version 16.VIII.2011, 54 pp.
- Nilsson A.N. 2013: A World Catalogue of the family Dytiscidae, or the Diving Beetles (Coleoptera, Adepaga). Version 1.I.2013. Umea: distributed electronically as a PDF file by the author, 304 pp.
- Pederzani F. 1995: Keys to identification of the genera and subgenera of adult Dytiscidae (sensu lato) of the world (Coleoptera: Dytiscidae). *Atti. Acc. Rov. Agiati, a.* 244 (1994), ser. Vii, **4**: 5-83.
- Schenkling S. (ed.) 1910-40: *Coleopterorum Catalogus*. 31 vol., 170 pars; W. Junk Publ., The Hague.

- Short Andrew E. Z. & Fikacek Martin 2011: World Catalogue of the Hydrophiloidea (Coleoptera): Additions and Corrections II (2006–2010), *Acta Entomologica Musei Nationalis Pragae*, Volume **51**(1): 83–122.
- Vazirani, T.G. 1969a: Contribution to the study of aquatic beetles (Coleoptera). 2. A review of the subfamilies Noterinae, Laccophilinae, Dytiscinae and Hydroporinae (In part) from India. *Oriental Ins.*, **2**(3 & 4): 221–341.
- Vazirani, T.G. 1969b: Contribution to the study of aquatic beetles (Coleoptera). VI. A review of Hydroporinae: Dytiscidae, in part, from India, *Bull. Mus. Nat. Hist. Nat. Paris* (2) **41**(1): 203-225.
- Vazirani T.G. 1977: Catalogue of Oriental Dytiscidae *Rec. zool. Surv. India, Occ. Pap.* No. **6**: 1-111.
- Vazirani, T.G. 1984: *The Fauna of India*. Coleoptera, Family Gyrinidae and Family Haliplidae; Zoological Survey of India, Calcutta, Pp. 140.
- Wewalka G. 1975: Revision der Artengruppe des *Hydaticus vittatus* (Fabricius), (Dytiscidae, Col.). *Koleopterologische Rundschau*, **52**: 87-100.
- Wewalka, G. 1979: Revision der Artengruppe des *Hydaticus* (Guignotites) *fabricii* (Mac Leay), (Col., Dytiscidae). *Koleopterologische Rundschau*, **54**: 119-139.
- Zhang, Z.Q. 2011: Animal biodiversity: An introduction to higher-level classification and taxonomic richness. *Zootaxa*, **3148**: 07–12.



**List of aquatic beetle species and sub-species known from Madhya Pradesh**

I. Family : GYRINIDAE	
1.	<i>Dineutus (Protodineutus) indicus</i> Aube, 1938
2.	<i>Dineutus (Spinosodineutus) unidentatus</i> (Aube, 1838)
3.	<i>Aulonogyrus obliquus</i> (Walker, 1958)
4.	<i>Gyrinus convexiusculus</i> Macleay, 1871
5.	<i>Orectochilus (Patrus) cardoni</i> Regimbart, 1891
6.	<i>O. (P.) discifer</i> (Walker, 1859)
7.	<i>O. (P.) fletcheri</i> Ochs, 1925
8.	<i>O. (P.) haemorrhous</i> Regimbart, 1891
9.	<i>O. (P.) indicus</i> Regimbart, 1883
10.	<i>O. (P.) limbatus</i> Regimbart, 1883
11.	<i>O. (P.) orissaensis</i> Vazirani, 1958
12.	<i>O. (P.) productus</i> Regimbart, 1883
13.	<i>O. (P.) ritsemae</i> Regimbart, 1882
14.	<i>O. (P.) semivestitus</i> Guerin, 1840
II. Family HALIPLIDAE	
15.	<i>Haliplus (Liaphlus) agarwali</i> Vazirani, 1984
16.	<i>H. (L.) angustifrons</i> Regimbart, 1892
17.	<i>H. (L.) kapuri</i> Vazirani, 1975
18.	<i>H. (L.) pruthii</i> Vazirani, 1966
19.	<i>H. (L.) pulchellus indicus</i> Regimbart, 1899
III. Family NOTERIDAE	
20.	<i>Neohydrocoptus subvittulus</i> (Motschulsky, 1859)
21.	<i>Canthydrus angularis</i> Sharp, 1882
22.	<i>C. laetabilis</i> (Walker, 1858)
23.	<i>C. luctuosus</i> (Aube, 1838)
24.	<i>C. ritsemae</i> (Regimbart, 1880)
IV. Family DYTISCIDAE	
25.	<i>Agabus (Gaurodytes) debilipes</i> Régimbart, 1899
26.	<i>Rhantaticus congestus</i> (Klug, 1832)
27.	<i>Sandracottus dejeani</i> (Aubé, 1838)
28.	<i>S. festivus</i> (Illiger, 1801)
29.	<i>S. mixtus</i> (Blanchard, 1843)
30.	<i>Cybister (Cybister)cognatus</i> Sharp, 1882

31.	<i>C. (C.) confusus</i> Sharp, 1882
32.	<i>C. (C.) concessor</i> Guignot, 1947
33.	<i>C. (C.) limbatus</i> (Fabricius)
34.	<i>C. (C.) pectoralis</i> Sharp, 1882
35.	<i>C. (C.) rugulosus</i> (Redtenbacher, 1844)
36.	<i>C. (C.) tripunctatus lateralis</i> (Fabricius, 1798)
37.	<i>C. (C.) ventralis</i> Sharp, 188
38.	<i>C. (Melanectes) convexus</i> Sharp, 1882
39.	<i>C. (M.) posticus</i> Aube, 1838
40.	<i>C. (M.) sugillatus</i> Erichson, 1834
41.	<i>Eretes griseus</i> (Fabricius, 1781)
42.	<i>Hydaticus (Prodaticus) luczonicus</i> Aube, 1838
43.	<i>H. (P.) incertus</i> Regimbart, 1888
44.	<i>H. (P) ricinus</i> Wewalka, 1979 *
45.	<i>H. (P.) vittatus vittatus</i> (Fabricius, 1775)
46.	<i>Hydroglyphus flammulatus</i> (Sharp, 1882)
47.	<i>H. geminus</i> (Fabricius, 1792)
48.	<i>H. inconstans</i> (Regimbart, 1892)
49.	<i>H. pendjabensis</i> (Guignot, 1954)
50.	<i>Leiodytes indicus</i> (Regimbart, 1892)
51.	<i>Peschetius quadricostatus</i> (Aube, 1838)
52.	<i>Hydrovatus confertus</i> (Sharp, 1882) *
53.	<i>H. rufescens</i> Motschulsky, 1859
54.	<i>H. sinister</i> Sharp, 1890
55.	<i>Herophydrus musicus</i> (Klug, 1834)
56.	<i>Hyphoporus aper</i> Sharp, 1882
57.	<i>H. elevatus</i> Sharp, 1882
58.	<i>H. severini</i> Régimbart, 1892
59.	<i>Hyphydrus gschwendtneri</i> Guignot, 1942
60.	<i>H. lyratus flavicans</i> Régimbart, 1892
61.	<i>H. renardi</i> Severin, 1890
62.	<i>Laccophilus anticatus anticatus</i> Sharp, 1890
63.	<i>Laccophilus elegans</i> Sharp, 1882*
64.	<i>Laccophilus ellipticus</i> Régimbart, 1899

65.	<i>L. flexuosus</i> Aubé, 1838
66.	<i>L. inefficiens</i> (Walker, 1859)
67.	<i>L. kaszabi</i> Brancucci, 1983
68.	<i>L. parvulus parvulus</i> Aubé, 1838
69.	<i>L. punctatissimus</i> Brancucci, 1983
70.	<i>L. sharpi</i> Régimbart, 1889
71.	<i>L. uniformis</i> Motschulsky, 1859
72.	<i>Neptosternus circumductus</i> Régimbart, 1899
	V. Family HYDROPHILIDAE
73.	<i>Hydrophilus olivaceus</i> (Fabricius, 1781)
74.	<i>Sternolophus rufipes</i> Fabricius
75.	<i>Berosus indicus</i> Motschulsky, 1861
76.	<i>B. pulchellus</i> Macleay, 1825*
77.	<i>Regimbartia attenuata</i> (Fabricius, 1801)
78.	<i>Enochrus esuriens</i> (Walker, 1858) *
79.	<i>Helochares ancholaris</i> Sharp, 1890*
80.	<i>H. crenatus</i> Regimbart, 1903
81.	<i>H. pallens</i> (Macleay, 1825) *
82.	<i>Dactylosternum abdominale</i> Fabricius, 1792 *
83.	<i>Sphaeridium dimidiatum</i> Gory, 1834*
84.	<i>Sphaeridium quinquemaculatum</i> Fabricius, 1798*
	VI. Family HYDROCHIDAE
85.	<i>Hydrochus binodosus</i> Motschulsky, 1860*

\* First time recorded from Madhya Pradesh.