



FURTHER CONTRIBUTION ON DIVING BEETLES FROM MAHARASHTRA, INDIA (COLEOPTERA: DYTISCIDAE)

SUJIT KR. GHOSH

Zoological Survey of India, 'M' Block, New Alipur, Kolkata-700 053.

Sujitghosh45@yahoo.com

INTRODUCTION

Two hundred fifty one species belong to diving beetles of India pertaining to 48 from Maharashtra state (Ghosh & Nilsson, 2012). Knowledge on these beetles are quite insufficient. The species described from Maharashtra are *Pescheti* *quadricostatus* & *Laccophilus parvulus* by Aube (1838). *Microdytes belli* described by J.Balfour-Browne (1946). Vazirani (1968, 1977) described *Clypeodytes hemani*, *Microdytes sabitae* and *Lacconectus lambai*. *Yola indica* described by Bistrom (1983). This century, K.B. Miller & Wewalka (2010) described *Microdytes whitingi*. Further, some species reported from Maharashtra by our experts like Vazirani (1977), Brancucci (1986), Sharma (2002) and Ghosh & Hegde, in press.

The present study is based on a small collection of dytiscid beetles, collected from fresh water bodies of different parts of Maharashtra State by the workers of Zoological Survey of India. Author studied 48 examples of Dytiscidae beetles under 14 species of 12 genera from Maharashtra State. Two species are first time recorded from the state i.e. *Hydaticus ricinus* Wewalka and *Herophydrus musicus* (Klug). Recently, Ghosh & Hegde (in press) recorded *Hydaticus satoi satoi* Wewalka from this state. Altogether, the recorded species from Maharashtra state are 51.

1. *Rhantus taprobanicus* Sharp, 1890

1890. *Rhantus taprobanicus* Sharp, *Trans. Entom. Soc. Lond.* **1890**: 346.

Material examined: Dist. Ahmadnagar, Dongergaon, alt. 2345ft, 19.2433N, 74.7514E, 07.IX.2012, coll. M.E. Hassan & party, 5 exs (Reg. No. 20490-94/H4A); Dist. Satara, Kaas valley, 28.VIII.2013, coll. K. Chandra & B. Mitra, 4ex (Reg. No. 20486-89/H4A).

Distribution: India: Delhi, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Maharashtra, Manipur, Meghalaya, Pondicherry, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere*: Nepal, Pakistan and Sri Lanka.

2. *Lacconectus lambai* Vazirani, 1977

1977. *Lacconectus lambai* Vazirani, *Rec. Zool. Surv. India*, **73**: 127.

1986. *Lacconectus rossi* Brancucci, *Entom. Basiliensia* **11**: 155.

Material Examined: Dist. Satara, Kaas valley, 28.VIII.2013, coll. K. Chandra & B. Mitra, 5ex (Reg. No. 20495-20500 /H4A).

Distribution: India: Maharashtra.

3. *Sandracottus dejeanii* (Aube, 1838)

1838. *Hydaticus dejeanii* Aube, in *Dejean's Species Coleopteres*, **6**: 165.

1882. *Sandracottus dejeanii*: Sharp, *Sci. Trans. R. Dublin Soc.*, **2**: 686.

Material examined: Dist. Chandrapur, Samrapet, 07.IX.2013, coll. M.E. Hassan & party, 3ex (Reg. No. 20501-503 /H4A); Dist. Yavatmal, Mohagaon, 20.43379N, 78.39848E, 11.IX.2013, coll. M.E. Hassan & party, 1ex (Reg. No. 20504 /H4A).

Distribution: India: Arunachal Pradesh, Andhra Pradesh, Gujarat, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere:* Pakistan, Iran, Afrotropical region and Australian region.

4. *Cybister tripunctatus lateralis*

(Fabricius, 1798)

1798. *Dytiscus lateralis* Fabricius, *Supp. Entom. Syst.* 64.

1980. *Cybister tripunctatus (Meganectes) asiaticus*: Vavirani, *Bull. zool. Surv. India*, **3**(1 & 2): 30.

2001. *Cybister (Cybister) tripunctatus lateralis*: *World cat. Insects*, Apollo Books, **3**: 90.

Material Examined: Dist. Raigad, Virsali Sea beach, 21.IX.2013, coll. Chotelal Das, 1ex. (Reg. No. 20505/H4A).

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 and West Bengal. *Elsewhere:* Afghanistan, Bangladesh, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, China, Cyprus, Iran, Iraq, Japan, Kyrgyzstan, Mongolia, Russia, Syria, Tajikistan, Turkmenistan, Turkey, Uzbekistan and Europe.

5. *Hydaticus luzonicus* Aube, 1838

1838. *Hydaticus luzonicus* Aube, in *Dejean's species Coleopteres*, **6**: 179.

Material examined: Dist. Chandrapur, Samrapet, 07.IX.2013, coll. M.E. Hassan & party, 2 exs (Reg. No. 20506-07 /H4A); Dist. Yavatmal, Mohagaon, 20.43379N, 78.39848E, 11.IX.2013, coll. M.E. Hassan & party, 1ex (Reg. No. 20508 /H4A); Dist. Wardha, Sewagram, 20.25805N, 78.09284E, 14.IX.2013, coll. M.E. Hassan & party, 5 exs (Reg. No. 20509-13 /H4A).

Distribution: India: Bihar, Delhi, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere:* Indonesia, Philippines, Sri Lanka, Thailand and Vietnam.

6. *Hydaticus ricinus* Wewalka, 1979

1979. *Hydaticus ricinus* Wewalka, *Koleop. Rund.* **54**: 128.

Material examined: Dist. Sangli, Tasgaon, 6.15622N, 73.42564E, 21.VI.2014, coll. M.E. Hassan & party, 1ex (Reg. No. 20514/H4A).

Distribution: India: Assam, Himachal Pradesh (Ghosh & Hegde, 2013), Tamil Nadu. *Elsewhere:* Afghanistan, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, China, Laos, Thailand, Vietnam.

Remarks: This species is first time recorded from Maharashtra.

7. *Hydaticus satoi satoi* Wewalka, 1975

1975. *Hydaticus satoi* Wewalka, *Koleop. Rund.* **52**: 91.

2012. *Hydaticus (Prodaticus) satoi satoi*: Ghosh & Nilsson, *Skorvnoopparn Umel supplement* **3**: 27.

Material examined: Dist. Solapur, Hipparange, alt. 1521 ft, 17.42290N, 75.54568E, 17.VI.2014, coll. M.E. Hassan & party, 1ex (Reg. No. 20515 /H4A); Dist. Sangli, Tasgaon, 16.15622N, 73.42564E, 21.VI.2014, coll. M.E. Hassan & party, 1ex (Reg. No. 20516/H4A).

Distribution: India: Kerala, Maharashtra (Ghosh & Hegde, in press), Sikkim, Tamil Nadu and West Bengal. *Elsewhere:* Bhutan, Myanmar, Nepal, Sri Lanka, China, Indonesia, Japan, Philippines, Saudi Arabia, Taiwan and Thailand.

Remarks: This species recorded from Karanala Birds Sanctuary, Maharashtra by Ghosh & Hegde (in press).

8. *Hydroglyphus flammulatus* (Sharp, 1882)

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

1988. *Hydroglyphus flammulatus*: Bistrom, *Acta Zool. Fenn*, **165**: 12.

Material examined: Dist. Ahmadnagar, Dongergaon, alt. 2345ft, 19.2433N, 74.7514E, 07.IX.2012, coll. M.E. Hassan & party, 2ex (Reg. No. 20517-18 /H4A).

Distribution: India: Andhra Pradesh, Assam, Bihar, Gujarat, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh and West Bengal. *Elsewhere:* China and Pakistan.

9. *Peschetius toxophorus* Guignot, 1942

1942. *Peschetius toxophorus* Guignot, *Bull. Soc. et. Sci. nat. Vaucluse*, **13**(1-2): 20.

Material examined: Dist. Chandrapur, Samrapet, 07.IX.2013, coll. M.E. Hassan & party, 1ex (Reg. No. 20519/H4A); Dist. Sindhudurg, Bijlinagar, 16.15622N, 73.42564E, 28. VI. 2014, coll. M. E. Hassan, 2 exs (Reg. No. 20520-21/H4A).

Distribution: India: Andhra Pradesh, Bihar, Gujarat, Jharkhand, Karnataka, Kerala, Maharashtra, Odisha, Rajasthan and Tamil Nadu.

10. *Herophydrus musicus* (Klug, 1834)

1834. *Hydroporus musicus* Klug, *Symb. Physicae*, **3**: 12.

1895. *Herophydrus musicus*: Regimbart, *Mem. Soc. Entom. Belg.* **4**: 43.

Material examined: Dist. Solapur, Hipparange, alt.1521 ft, 17.42290N, 75.54568E, 17.VI.2014, coll. S. K. Chakraborty, 6 exs (Reg. No. 20522-27/H4A).

Distribution: India: Andhra Pradesh, Delhi, Gujarat, Jharkhand, Madhya Pradesh, Rajasthan, Tamil Nadu and Uttar Pradesh. *Elsewhere:* Afghanistan, China, Europe, Iran, Iraq, Israel, Kazakhstan, Myanmar, Nepal, North Africa, Pakistan, Sri Lanka, Syria, Tajikistan, Turkey, Uzbekistan and Yemen.

Remarks: This species is first time recorded from Maharashtra.

11. *Hyphoporus aper* Sharp, 1882

1882. *Hyphoporus aper* Sharp, *Sci. Trans. R. Dublin Soc.* **2**: 390.

Material examined: Dist. Wardha, Sewagram, 20.25805N, 78.09284E, 14.IX.2013, coll. M.E. Hassan & party, 1ex (Reg. No. 20528/H4A).

Distribution: India: Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere:* Pakistan and Iran.

12. *Hyphydrus intermixtus* (Walker, 1858)

1858. *Hydroporus intermixtus* Walker, *Ann. Mag. Nat. Hist.* (3)**2**: 204.

1936. *Hyphydrus intermixtus*: Balfour-Browne, *Entom. Month. Mag.* **72**: 129.

Material examined: Dist. Chandrapur, Samrapet, 07.IX.2013, coll. M.E. Hassan & party, 1ex (Reg. No. 20529/H4A); Dist. Wardha, Sewagram, 14.IX.2013, 20.25805N, 78.09284E, coll. M.E. Hassan & party, 1ex (Reg. No. 20530/H4A).

Distribution: India: Gujarat, Kerala, Maharashtra, Rajasthan and Tamil Nadu. *Elsewhere:* Sri Lanka.

13. *Laccophilus inefficiens* (Walker, 1859)

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

1882. *Laccophilus inefficiens*: Sharp, *Sci. Trans. R. Dublin Soc.* **2**: 287.

Material examined: Dist. Ahmadnagar, Dongergaon, alt. 2345ft, 19.2433N, 74.7514E, 07.IX.2012, coll. M.E. Hassan & party, 1ex (Reg. No. 20531/H4A).

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 and West Bengal. *Elsewhere:* Bangladesh, Bhutan, Myanmar, Nepal, Pakistan, Sri Lanka, Indonesia, Iran and Malaysia.

14. *Laccophilus sharpi* Regimbart, 1889

1889. *Laccophilus sharpi* Regimbart, *Ann. Soc. Entom. Fra.* (6)**9**: 151.

Material examined: Dist. Ahmadnagar, Dongergaon, alt. 2345ft, 19.2433N, 74.7514E, 07.IX.2012, coll. M.E. Hassan & party, 1ex (Reg. No. 20532/H4A); Dist. Solapur, Hipparange, alt.1521 ft, 17.42290N, 75.54568E, 17. VI. 2014, coll. M.E. Hassan & party, 1ex (Reg. No. 20533/H4A).

Distribution: India: Andaman & Nicobar Islands, Assam, Bihar, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Pondichery, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh and West Bengal. *Elsewhere:* Myanmar, Nepal, Pakistan, Sri Lanka, China, Hong Kong, Indonesia, Iran, Iraq, Japan, Philippines, Saudi Arabia, South

Korea, Taiwan, Vietnam, African region, and Australian region.

SUMMARY

The present study records 48 examples of Dytiscidae beetles under 14 species of 12 genera from Maharashtra State. Two species are first time record from the state i.e. *Hydaticus ricinus* Wewalka and *Herophydrus musicus* (Klug).

ACKNOWLEDGEMENTS

Author are thankful to the Director, Zoological Survey of India, for providing necessary facilities and encouragement. Thanks are also Dr. Kailash Chandra, Scientist-‘F’ & Divisional in charge of Ent. Div. (A) for his useful suggestions and valuable guidance. Author is grateful to Dr. V.D. Hegde, Scientist-‘D’ & Officer-in-charge of Coleoptera Section for his constant support.

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