

OPEN ACCESS



The Journal of Threatened Taxa is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at www.threatenedtaxa.org. All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction, and distribution by providing adequate credit to the authors and the source of publication.



Journal of Threatened Taxa

Building evidence for conservation globally

www.threatenedtaxa.org

ISSN 0974-7907 (Online) | ISSN 0974-7893 (Print)

SHORT COMMUNICATION

TAXONOMIC REVISION OF THE GENUS *ATMETONYCHUS* (COLEOPTERA: CURCULIONIDAE: ENTIMINAE) FROM THE INDIAN SUBCONTINENT

G. Mahendiran & V.V. Ramamurthy

26 November 2017 | Vol. 9 | No. 11 | Pp. 10904–10908

10.11609/jott.3405.9.11.10904-10908



For Focus, Scope, Aims, Policies and Guidelines visit http://threatenedtaxa.org/About_JoTT

For Article Submission Guidelines visit http://threatenedtaxa.org/Submission_Guidelines

For Policies against Scientific Misconduct visit http://threatenedtaxa.org/JoTT_Policy_against_Scientific_Misconduct

For reprints contact [<info@threatenedtaxa.org>](mailto:info@threatenedtaxa.org)

Partner



Publisher/Host





TAXONOMIC REVISION OF THE GENUS *ATMETONYCHUS* (COLEOPTERA: CURCULIONIDAE: ENTIMINAE) FROM THE INDIAN SUBCONTINENT

G. Mahendiran¹ & V.V. Ramamurthy²

ISSN 0974-7907 (Online)
ISSN 0974-7893 (Print)

OPEN ACCESS



Abstract: Genus *Atmetonychus* Schoenherr (1840) known from India and Bangladesh is revised. The generic and species description has been updated through addition of measurements, description of elytral vestiture and genitalic characters. These are supported by 28 illustrations including 21 line diagrams.

Keywords: Entiminae, redescription, taxonomy, weevils.

Marshall (1916) included the genus *Atmetonychus* under the group Tanymecides of the subfamily Brachyderinae under the division Adelognathi. Emden (1944) categorized it under the subtribe Piazomiina of tribe Tanymecini of Brachyderinae. But, Thompson (1992) brought under Entiminae, and Alonso-Zarazaga & Lyal (1999) included it under the subtribe Piazomiina, of the tribe Tanymecini. The tribe Tanymecini is recognized by the presence of vibrissae on the prothorax, while the subtribe Piazomiina is characterized by its connate claws or their fusion into a single claw. Presently, *Atmetonychus* is under the subtribe Piazomiina of the tribe Tanymecini under the subfamily Entiminae of Curculionidae. *Atmetonychus* was first described by Schoenherr (1840). Later, Marshall (1916) redescribed and provided a key. Pajni & Gandhi (1984) added male and female genitalia to its description.

Only one species described till date, namely,

peregrinus, which was described under *Curculio* by Olivier (1807) and later designated as the type species by Schoenherr (1840). Marshall (1916) synonymized *inaequalis* (Boheman) with *peregrinus* (Olivier). Pajni & Gandhi (1984) described the genitalia structure of *peregrinus*. It was also observed that the tibial apex in this species is enclosed as pointed out by van Emden (1944) and not open as stated by Marshall (1916). *Atmetonychus* is known so far from India and Bangladesh, in India it is known from Assam, Bihar, Haryana, Himachal Pradesh, Odisha, Uttar Pradesh and West Bengal.

As per economic importance, *Atmetonychus peregrinus* had been reported as a pest of *Mangifera indica*, *Prunus persica* and *Prunus communis* (Stebbing, 1914); *Zizyphus mauritiana* (Beeson, 1941; Browne, 1968); *Terminalia arjuna* and *T. tomentosa* (Mishra et al. 1995).

MATERIAL AND METHODS

Voucher material including types deposited at National Pusa Collection (NPC), Division of Entomology, Indian Agricultural Research Institute, New Delhi. The methodology and terminology was followed (Supare et al. 1990; Thompson 1992; Poorani & Ramamurthy 1997; Wanat 2007). WILD M8 stereozoom microscope,

DOI: <http://doi.org/10.11609/jott.3405.9.11.10904-10908> | **ZooBank:** <urn:lsid:zoobank.org:pub:7124BBF7-786A-44F1-B43A-6AF96FB3680F>

Editor: Anonymity requested.

Date of publication: 26 November 2017 (online & print)

Manuscript details: Ms # 3405 | Received 16 February 2017 | Final received 02 November 2017 | Finally accepted 09 November 2017

Citation: Mahendiran, G. & V.V. Ramamurthy (2017). Taxonomic revision of the genus *Atmetonychus* (Coleoptera: Curculionidae: Entiminae) from the Indian sub-continent. *Journal of Threatened Taxa* 9(11): 10904–10908; <http://doi.org/10.11609/jott.3405.9.11.10904-10908>

Copyright: © Mahendiran & Ramamurthy 2017. Creative Commons Attribution 4.0 International License. JoTT allows unrestricted use of this article in any medium, reproduction and distribution by providing adequate credit to the authors and the source of publication.

Funding: ICAR-Indian Agricultural Research Institute, New Delhi.

Competing interests: The authors declare no competing interests.

Acknowledgements: The first author is thankful to ICAR-IARI, New Delhi for awarded senior research fellowship for pursuing Ph.D.

Leica MZ 16A stereozoom microscope, LEITZ ORTHOLUX II interference, phase contrast, compound microscope, and Leica DFC-290 camera attached with Leica application suit ver. 2.8.2 were used in the taxonomic studies. Illustrations were made using a drawing tube fitted with a camera lucida. The scales of magnification are provided on the illustrations.

RESULTS

Taxonomic studies

Genus *Atmetonychus* Schoenherr, 1840: 214.

Agrestus Wiedemann, 1823:164; Alonso Zarazaga and Lyal, 1999:180.

Gender: Masculine

Type species *Curculio peregrinus* Olivier, 1807: 324

Genus description

General colour black with uniform grey or brownish vestiture and ventrally paler. Head with frons projecting laterally above eyes, which are lateral, very prominent. Rostrum continuous with and 1.54x as long as head, plane above, angulate laterally, triangularly emarginate at apex, scrobes deep, gently curved, passing below eyes and becoming wider and shallower, mandibles not prominent, with a distinct scar, mentum large, quite filling cavity, submentum without peduncle (Fig. 1). Antennae with scape gradually clavate and reaching eye (Fig. 2), first funicle segment 1.48x longer than second, third to seventh subequal, 1.16x broader than long and closely set, club four segmented and sharply acuminate (Fig. 4). Prothorax bisinuate at posterior margin, vertically truncate at anterior margin, anterior margin not sinuate ventrally. Scutellum 1.48x longer than broad. Elytra subtruncate at basal margin, 1.45x broader than prothorax at shoulders, which are roundly rectangular and gradually narrowing from there to apex, with ten shallow sulci, margins broadly sinuate above hind coxae, posterior declivity sloping gradually. Elytral vestiture of two types, predominant flat, subcircular to ovate, with irregular impressions on surface, brown, with hyaline outer core (Figs. 10, 11), less predominant very elongate, with a subrectangular pedicel, more granulations at basal half and dull white (Figs. 12, 13). Sternum with fore coxae at middle of prosternum, mesosternum with epimera large, almost as long as episterna, metasternum 1.37x longer than middle coxae, episterna distinct and fairly broad, hind coxae not reaching the elytra. Venter with intercoxal process rounded and 0.72x narrower than hind coxae, second ventrite 1.55x longer than third and fourth together and separated from first by a curved incision, (Fig. 6). Legs with hind femora not clavate,

middle and fore femora moderately so, tibiae almost straight, fore tibia produced internally at apex, hind tibial apex enclosed, tarsi with second segment triangular and 1.32x longer than broad, third segment 1.10x broader than second, fourth elongate and with a single, long claw (Fig. 7). Male genitalia with aedeagus 2.44x as long as apophyses, 1.56x as its median lobe, 1.22x as long as spiculum gastrale, 1.78x as long as the tegmen, median lobe sclerotized, apex triangular, bow shaped laterally, with sharply pointed apex, 2.09x as long as manubrium. Apophyses 0.64x as broad as manubrium (Figs. 17, 18, 19, 25). Tegmen 1.9x as long as manubrium, parameres elongate, apex bluntly rounded, manubrium slightly broader at base (Fig. 21). Spiculum gastrale 2x as long as apophyses and 1.46x as long as tegmen, uniformly thick with bluntly pointed apex, 3x as broad as apophyses and 1.88x as broad as that of manubrium (Fig. 20; Image 5). Female genitalia having spermatheca with distal arm 1.39x as long as proximal; nodulus distinct and rounded; ramus projecting out, subrectangular, apex moderately rounded; cornu straight, tubular, apex rounded, slightly projecting away from proximal arm (Figs. 14, 15, 22; Image 2). Spiculum ventrale with shaft elongate, 1.46x as long as basal plate, apex constricted and clubbed, basal plate 1.28x as broad as long, apex rounded with hairs (Fig. 16; Image 3).

Species description

Atmetonychus peregrinus (Olivier)

(Figs. 1–21; Images 1–7)

Synonyms

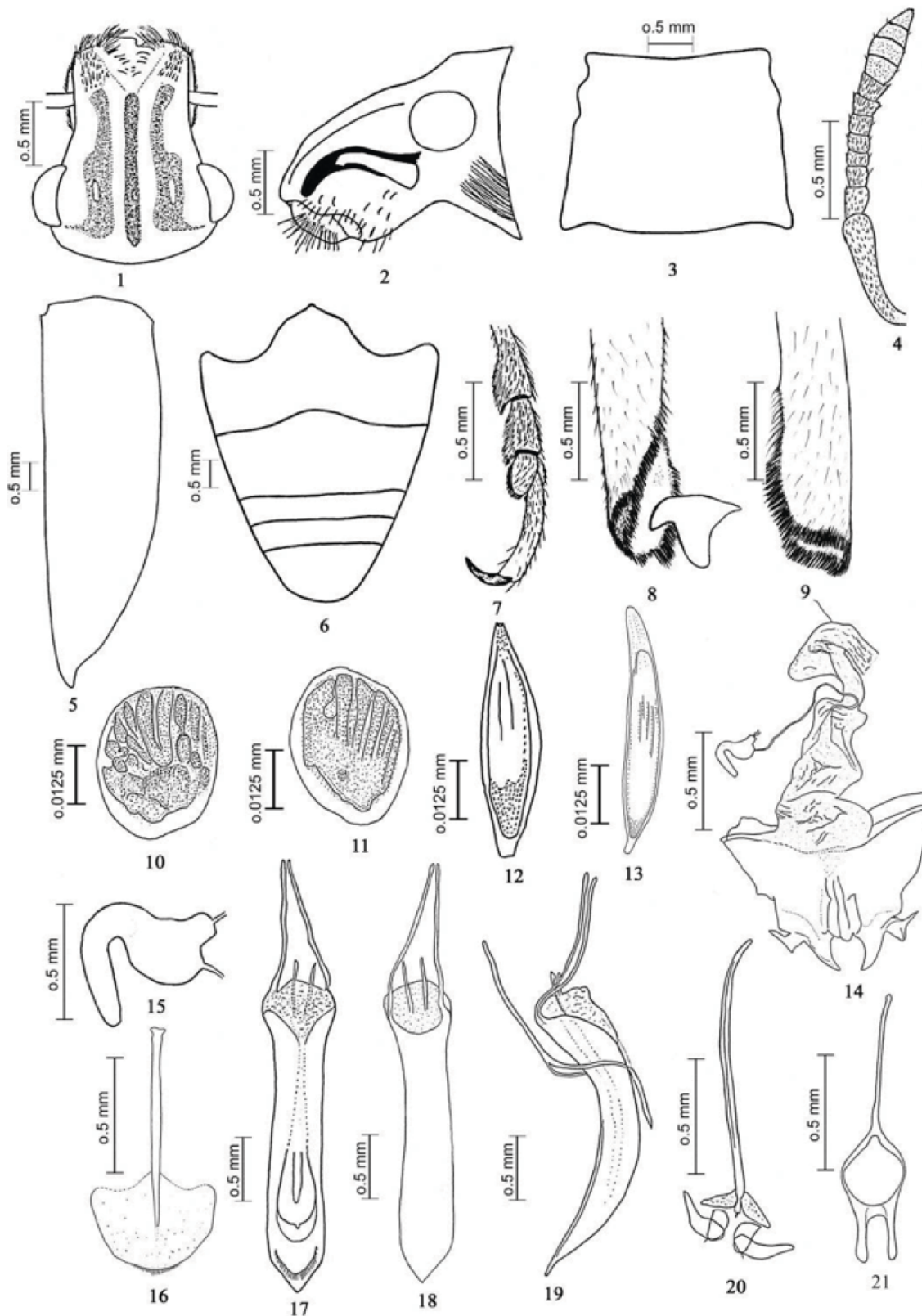
Curculio peregrinus Olivier, 1807: 324; Schoenherr, 1840: 214.

Anaemerus peregrinus Gyllenhal in Schoenherr, 1834: 75; Marshall, 1916: 112.

Curculio rugosus Wiedemann in Germar, 1821: 155; Sturm, 1843: 193.

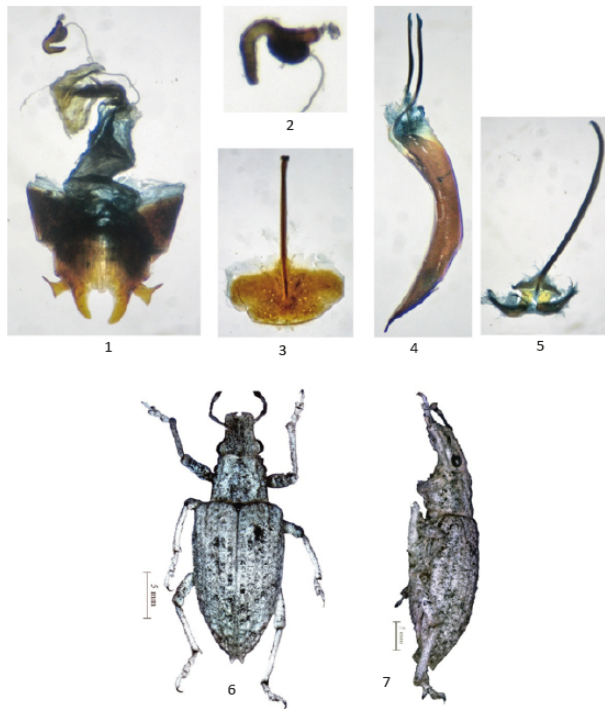
inaequalis Boheman in Schoenherr, 1840: 214; Marshall, 1916: 112.

Specimens examined: Location, date and coll. unknown, 4 specimens; Bangladesh and Assam, 1.viii.1907, coll. B. Singh; Assam: Tejpur, 12.iv.1977, coll. unknown, at tube light, 4 specimens; Barah, Silchar, 18.iv.1986, coll. Dalip. K, on soil; Lakhimpur, 28.iv.1980, coll. unknown, on wild plant; Bihar: Pusa, 1907, Coll. D.P.S.; 1907, coll. H.M.L.; vii.1906, coll. D.P.S., on ber; Chapra, date unknown, Mackenzie coll., 7 specimens; Chapra, date and coll. unknown; Haryana: Ambala, 6.viii.1906, coll. U.N.S., on bhendi; Himachal Pradesh: Bilaspur, 9.ix.1977, coll. unknown, on berry, 3 specimens; Kangra forest, 18.vii.1985, coll. B. Singh, on bushes, 5



Figures 1–21. *Atmetonychus peregrinus*

1 - Head, dorsal view; 2 - Lateral view; 3 - Thorax, dorsal view; 4 - Antenna; 5 - Elytron, dorsal view; 6 - Venter; 7 - Claw; 8–9 - Hind tibial apex; 10–13 - Elytral vestiture, female genitalia; 14 - Genital chamber; 15 - Spermatheca; 16 - Spiculum ventral, male genitalia; 17 - Median lobe, dorsal view; 18 - Ventral view; 19 - Lateral view; 20 - Spiculum gastrale; 21 - Tegmen.



Images 1–7. *Atmetonychus peregrinus*. Female genitalia 1 - Genital chamber; 2 - Spermatheca; 3 - Spiculum ventral, male genitalia; 4 - Median lobe, lateral view; 5 - Spiculum gastrale; 6–7 - Dorsal and lateral view habitus. © Authors

specimens; Kangra, 19.vii.1985, coll. B. Singh, on berry, 2 specimens; Orissa: Cuttack, 28.xii.1906, coll. D.N.P., on potato leaves; Punjab: Gurdaspur, 26.x.1918, A.G.R. coll.; Uttar Pradesh: Faizabad, Uttar Pradesh, 16.xii.1904, coll. unknown, on *Papaver somniferum*.

Description: General colour black with uniform grey or brownish vestiture, under parts paler (Images 6,7). Head 1.94x broader than long, constricted behind eye, frons with a deep central furrow and a broad shallow one on each side, 0.67x as long as rostrum, 0.48x as long as that of prothorax, 1.19x as broad as rostrum and 0.66x as broad as the prothorax. Rostrum almost parallel sided in male, 0.89x narrowed from the base to the middle in female, as long as broad, 0.85x as long as base of head, plane above, with a deep central furrow and a broad curved one on each side (Figs. 1, 2). Antennae with first segment longest, 1.53x, 2.06x, 1.95x, 1.80x and 1.60x as long as second, third and fourth, fifth, sixth and seventh, respectively; in terms of breadth, seventh segment broadest of all, 1.14x, 1.25x and 1.20x as broad as first and sixth, second to fourth, and fifth, respectively and segments second to fourth equally broad. Club 2.06x as long as first, and 3.28x as long and 1.36x as broad as seventh segment of funicle (Fig. 4). Prothorax 1.4x as long as and 1.8x as

broad as rostrum, broadest at base, 1.3x broader than long at base; breadth at base 1.26x as broad as at apex, posterior angles acute, sides almost straight and anterior angles shortly but acutely projecting, upper surface very rugose and uneven, with a deep central depression (Fig. 3). Legs black, with grey vestiture, upper edges with dense short setae, ventral surface with much longer setae, and femora rugosely punctate, tibiae almost straight, tibial apex enclosed (Fig. 8, 9), claw single, long (Fig. 7). Elytra 4.67x as long as rostrum, 3.35x as long as 1.53x as broad as that of prothorax, 1.38x broad as that of its breadth at base, gradually acuminate behind, apices separately mucronate, with shallow sulci, containing large deep punctations, intervals narrow and very uneven with short, subdepressed vestiture, which are often denser and longer in small irregular patches (Fig. 5; Image 6,7). Elytral vestiture of two types, predominant flat, subcircular to ovate, with irregular impression on the surface and brown with hyaline outer core (Fig. 10, 11); less predominant very elongate, with a subrectangular pedicel, more granulations at basal half and dull white (Fig. 12, 13). Venter with first ventrite longest, 1.30x, 4.12x and 1.73x as long as second, third and fourth and fifth, respectively; in term of breadth, first the broadest, 1.12x, 1.44x, 1.66x and 2.01x as broad as second, third, fourth and fifth, respectively (Fig. 6). Male genitalia with aedeagus 2.44x as long as apophyses, 1.56x as its median lobe, 1.22x as long as spiculum gastrale, 1.78x as long as the tegmen; median lobe sclerotized, apex triangular, bow shaped laterally with sharply pointed apex, 2.09x as long as manubrium; its base 1.39x as broad as middle and 1.2x as broad as breadth just before apex and 1.16x broad as at middle, from sides 11x as broad as that of apophyses. Apophyses 0.64x as broad as manubrium (Figs. 17, 18, 19; Image 4). Tegmen 1.9x as long as manubrium, parameres elongate, apex bluntly rounded, manubrium slightly broader at base (Fig. 21). Spiculum gastrale 2x as long as apophyses and 1.46x as long as tegmen, uniformly thick with bluntly pointed apex, its breadth 3x as broad as apophyses and 1.88x as broad as that of manubrium (Fig. 20; Image 5). Female genitalia having spermatheca with distal arm 1.39x as long as proximal, nodule distinct and rounded, ramus projecting out, subrectangular, apex moderately rounded, cornu stright, tubular, apex rounded, slightly projecting away from proximal arm (Figs. 14, 15; Images 1, 2). Spiculum ventrale with shaft elongate, 1.46x as long as basal plate, slightly broader at middle, apex constricted and clubbed, basal plate 1.28x as broad as long, apex rounded with hairs (Fig. 16; Image 3).

Length: 13.49±0.71 mm; Breadth: 4.81±0.31 mm.

Host: Mango (*Mangifera indica*), *Prunus persica*, *P. communis*, *Zizyphus mauritiana*, Ber, Bhendi, Berry, Potato, *Papaver somniferum*, *Terminalia arjuna* and *T. tomentosa*.

Distribution: India (Assam: Tejpur, Silchar, Lakhimpur; Bihar: Pusa, Chapra; Haryana: Ambala; Himachal Pradesh: Kangra, Bilaspur; Odisha: Cuttack; Punjab: Gurdaspur; Uttar Pradesh: Faizabad; West Bengal: Kolkata). Bangladesh (exact location unknown).

Remarks: The tibial apex in the present species is enclosed (van Emden 1944), and not open as stated by Marshall (1916).

DISCUSSION

This genus first described by Schoenherr (1840b), was included by Marshall (1916) under *Tanymecides* of Brachyderinae under the division Adelognathi, while van Emden (1944) categorized it under *Piazomiina* of *Tanymecini*. Thompson (1992) concluded that is an Entiminae. The concept of the genus developing now indicates that the tarsi having only a single claw is an important character for the distinction of the genus. Van Emden (1944) distinguished this genus by the character of single one claw, third tarsal segment distinctly broader and deeply bilobed, and tibial apex enclosed. Pajni & Gandhi (1984) differentiated it from *Hypomeces*, by the same characters. Results of the present study corroborate the views of van Emden (1944) and Pajni & Gandhi (1984). The available taxonomic information including that of Pajni & Gandhi (1984) are obsolete and require augmentation. Additions of structure of male and female genitalia, especially clarity in the diagrams on medial lobe, tegmen and spiculum gastrale have been achieved now.

REFERENCES

- Alonso-Zarazaga, M.A. & C.H.C. Lyal (1999). A world catalogue of families and genera of Curculionoidea (Insecta: Coleoptera) (excepting Scolytidae and Platypodidae). Entomopraxis, S.C.P., Spain, 315pp.
- Beeson, C.F.C. (1941). *The Ecology and Control of the Forest Insects of India and the Adjacent Countries*. Vasant Press, Dehra Dun, 1008pp.
- Browne, F.G. (1968). Pests and Diseases of Forest Plantation Trees. An annotated list of the principal species occurring in the British Commonwealth, Clarendon Press, Oxford, 1330pp.
- Germar, E.F. (1821). Genera quaedam Curculionitum proposita, et speciebus observatis illustrate. *Magazin der Entomologie* 4: 291–345.
- Marshall, G.A.K. (1916). Coleoptera. Rhynchophora: Curculionidae. In: Shiply, A.E. (ed.). *The Fauna of British India including Ceylon and Burma*. Taylor and Francis, London, 367pp.
- Mishra, P.K., R.N. Singh, J. Jayswal & K. Thangavelu (1995). First report on *Atmetonychus peregrinus* Olivier (Coleoptera: Curculionidae) as a pest of *Terminalia arjuna* Bedd. and *Terminalia tomentosa* W.& A. *Indian Forester* 121(12): 1167–1168.
- Olivier, A.G. (1807). *Entomologie, ou Histoire Naturelle des insectes, avec leurs caracteres generiques et specifiques, leur description, leur synonymie, et leur figure enluminee*. Coleopteres. Vol. 5. Desray, Paris, 612pp.
- Pajni, H.R. & S.S. Gandhi (1984). Studies on Indian Piazomiina (*Tanymecini*, Brachyderinae, Curculionidae, Coleoptera). I. Genera with projecting elytral shoulders. *Annals of Entomology* 2(2): 13–30.
- Poorani, J. & V.V. Ramamurthy (1997). Weevils of the genus *Lepropus* Schoenherr from the Oriental region (Coleoptera: Curculionidae: Entiminae). *Oriental Insects* 31: 1–81.
- Schoenherr, C.J. (1834a). Genera et species curculionidum, cum synonymia hujus familiae. Species novae aut hactenus minus cognitae, descriptionibus a Dom. Leonardo Gyllenhal, C. H. Boheman. *et entomologis aliis illustratae* 2(1): 1–326.
- Schoenherr, C.J. (1840). Genera et species curculionidum, cum synonymia hujus familiae. Species novae aut hactenus minus cognitae, descriptionibus a Dom. Leonardo Gyllenhal, C.H. Boheman, *et entomologis aliis illustratae* 6(1): 1–474.
- Stebbing, E.P. (1914). *Indian forest insects of economic importance (Coleoptera)*. Eyre and Spottiswoode Ltd., London, 635pp.
- Sturm, J. (1843). *Catalog der kafersammlung von J. Sturm*. Nurnberg, 386pp.
- Supare, N.R., S. Ghai & V.V. Ramamurthy (1990). A revision of *Tanymecus* from India and adjacent countries (Coleoptera: Curculionidae). *Oriental Insects* 24: 1–126.
- Thompson, R.T. (1992). Observations on the morphology and classification of weevils (Coleoptera: Curculionidae) with a key to major groups. *Journal of Natural History* 26: 835–891.
- van Emden, F.I. (1944). A key to the genera of Brachyderinae of the world. *Annals and Magazine of Natural History* 11(11): 503–532; 559–586.
- Wanat, M. (2007). Alignment and homology of male terminalia in Curculionoidea and other Coleoptera. *Invertebrate Systematics* 21: 147–171.
- Wiedemann, C.R.W. (1823). Nothige Berichtigungen und Zusätze zu den Beschreibungen der Käfer aus Ostindien und vom Cap, im dritten stücke dieses und im vierten Bande des Germarischen magazins. *Zoologisches Magazin* 2(1): 162–164.





OPEN ACCESS



The Journal of Threatened Taxa is dedicated to building evidence for conservation globally by publishing peer-reviewed articles online every month at a reasonably rapid rate at www.threatenedtaxa.org. All articles published in JoTT are registered under [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) unless otherwise mentioned. JoTT allows unrestricted use of articles in any medium, reproduction, and distribution by providing adequate credit to the authors and the source of publication.

ISSN 0974-7907 (Online); ISSN 0974-7893 (Print)

November 2017 | Vol. 9 | No. 11 | Pages: 10865–10984

Date of Publication: 26 November 2017 (Online & Print)

DOI: 10.11609/jott.2017.9.11.10865-10984

www.threatenedtaxa.org

Communication

Flies matter: a study of the diversity of Diptera families (Insecta: Diptera) of Mumbai Metropolitan Region, Maharashtra, India, and notes on their ecological roles

-- Aniruddha H. Dhamorikar, Pp. 10865–10879

Short Communications

Small carnivores of the montane forests of Eravikulam National Park in the Western Ghats, India

-- S. Nikhil & P.O. Nameer, Pp. 10880–10885

Distribution and population of Himalayan Marmot *Marmota himalayana* (Hodgson, 1841) (Mammalia: Rodentia: Sciuridae) in Leh-Ladakh, Jammu & Kashmir, India

-- Vipin Chaudhary, R.S. Tripathi, Surjeet Singh & M.S. Raghuvanshi, Pp. 10886–10891

First record of Bourret's Horseshoe Bat *Rhinolophus paradoxolophus* (Mammalia: Chiroptera: Rhinolophidae) from Myanmar with a review of the taxonomy, distribution and ecology of the species

-- Sai Sein Lin Oo, Du Sar No, Lucia Nang Seng, Ngwe Lwin, Malcolm Pearch & Paul J.J. Bates, Pp. 10892–10898

A first record of the Smallfin Gulper Shark *Centrophorus moluccensis* Bleeker, 1860 (Chondrichthyes: Squaliformes: Centrophoridae) from the Andaman & Nicobar waters, Indian EEZ

-- H.D. Pradeep, Swapnil S. Shirke, M. Nashad & Monalisha Devi Sukham, Pp. 10899–10903

Taxonomic revision of the genus *Atmetonychus* (Coleoptera: Curculionidae: Entiminae) from the Indian subcontinent

-- G. Mahendiran & V.V. Ramamurthy, Pp. 10904–10908

A new species of dewflower *Murdannia sanjappae* (Commelinaceae) from Andaman Islands, India

-- Mudavath Chennakesavulu Naik & Boyina Ravi Prasad Rao, Pp. 10909–10913

First records of two Ginger Lily *Hedychium* (Zingiberaceae) species from the Western Ghats, India

-- Sinjumol Thomas, Susai John Britto & Bince Mani, Pp. 10914–10919

An annotated checklist of microbes associated with bamboo in the Indian subcontinent

-- O.K. Remadevi, P. Sharada & H.C. Nagaveni, Pp. 10920–10947

Notes

Roadkill records of Lowland Tapir *Tapirus terrestris* (Mammalia: Perissodactyla: Tapiridae) between kilometers 06 and 76 of highway BR-163, state of Pará, Brazil

-- Marco A. de Freitas, Rodrigo C. Printes, Eric K. Motoyama, Assor E. Fucks & Diogo Veríssimo, Pp. 10948–10952

Population size, herd structure and sex ratio of the Blackbuck *Antelope Cervicapra* (Mammalia: Cetartiodactyla: Bovidae) in a human dominated area in Odisha, India

-- Subrat Debata, Pp. 10953–10955

Recovery of Musk Deer *Moschus chrysogaster* Hodgson, 1839

(Artiodactyla: Moschidae) in Sakteng Wildlife Sanctuary, Bhutan

-- Sonam Tobgay, Thinley Wangdi & Kumbu Dorji, Pp. 10956–10958

First record of the Asiatic Brush-tailed Porcupine

***Atherurus macrourus* Linnaeus, 1758 (Mammalia: Rodentia:**

Hystricidae) from western Bhutan

-- Tashi Dhendup & Rinzin Dorji, Pp. 10959–10960

The Vulnerable Indian Skimmer *Rynchops albicollis* Swainson, 1838

(Aves: Charadriiformes: Laridae) breeding in Odisha, eastern India

-- Subrat Debata, Tuhinansu Kar, Kedar Kumar Swain & Himanshu Shekhar Palei, Pp. 10961–10963

On the occurrence of Black Baza *Aviceda leuphotes* Dumont, 1820

(Aves: Falconiformes: Accipitridae) in the Guptaeswar forests of the Eastern Ghats, Odisha, India

-- Swetashree Purohit, Manoj V. Nair & Sharat Kumar Palita, Pp. 10964–10967

New locality records of the Stout Sand Snake *Psammodon*

***longifrons* Boulenger, 1890 (Reptilia: Squamata: Lamprophiidae) in Telangana, India**

-- Avinash C. Visvanathan, Sandeep Anne & Aditya Kesav Kolli, Pp. 10968–10970

A note on the distribution of two highly threatened butterflies in

Sri Lanka (Lepidoptera: Lycaenidae: *Spindasis greeni* and *Rapala*

lankana*), with a report on the range extension of *S. greeni

-- Tharaka Sudesh Priyadarshana, Ishara Harshajith Wijewardhane & Mithila Karunaratna, Pp. 10971–10973

A new record of grass *Ottlochloa* (Poaceae) to the Eastern Ghats, India

-- Midigesi Anil Kumar, P. Anjaneyulu & Boyina Ravi Prasad Rao, Pp. 10974–10976

An extended distribution of Natesh's Cape-pondweed *Aponogeton*

***nateshii* (Aponogetonaceae), a new record to the state of Goa**

-- Rutuja Rajendra Kolte, Anup Satish Deshpande, Prabha Muraleedharan Pillai & Shrirang Ramchandra Yadav, Pp. 10977–10979

Detection of *Artyfechinostomum sufrartyfex* - a zoonotic parasite

from the Small Indian Mongoose *Herpestes auropunctatus*

(Mammalia: Carnivora: Herpestidae) in Jammu & Kashmir, India

-- Sanku Borkataki, Pankaj Goswami, Rajesh Katoch, Sahil Kumar & Pratiksha Raghuvanshi, Pp. 10980–10982

Book Review

Requisite for long term studies in ecology

-- S. Suresh Ramanan, Pp. 10983–10984