

REVISION OF THE GENUS *OIDES* WEBER (COLEOPTERA :CHRYSOMELIDAE) FROM PAKISTAN

SYEDA GHAZALA RIZVI¹, SYED KAMALUDDIN¹ AND KANWAL NAZIM²

¹*Dept. of Zoology, Federal Urdu University of Arts, Sciences and Technology,
Gulshan-e-Iqbal Campus, Karachi-Pakistan*

²*Marine Reference Collection and Resource Center (MRCC), University of Karachi, Karachi-Pakistan
Corresponding author e-mail:ghazala_rizvi@yahoo.com*

Abstract

The genus *Oides* Weber is revised with its six species with reference to their male and female genital components first time from Pakistan.

Introduction

Lefroy and Howlet (1909) reported only one species *O. bipunctata* F. as widely distributed in forests localities and occasionally in the plains of tropical India with brilliant colours patterns of adults and larvae. Bodwitch (1914) presented 4- new species of Austro-Malayan region with its existing characters. Maulik (1936) described species of *Oides* Weber morphologically with its distinguishing characters and its genital components. Hashmi and Tashfeen (1992) described 5- species of the genus *Oides* Weber in their checklist Coleoptera of Pakistan. Shinsaku kimoto (1966) described a list of Chrysomelid specimens of Taiwan preserved in Taiwan Zoological Museum. Abdullah (1971) described the primitive and derivative characters of the families of beetles with distinguishing characters of the families of order of Coleoptera. Bally (1973) described Grooming behavior in Coleoptera. Furth (1980) described the altica of Israil with distributional ranges and general characters of six species. Shinsaku and Kimoto (1989) presented chrysomelid of Thailand and Cambodia. Kamaluddin and Hashmi (1999a) revised the genus *Carabus*. Medvedev (2000) studied the Chrysomelids of Nepal and listed the distribution of only one species of *Oides scvetellata* Hope. Kalichalven and Verma (2005) gave a checklist of leaf beetles of Bhilai Durg and included only one species *Oides bipunctata fabricis* collected from vitis trifolia in rainy season. Aston (2009) explained two new species of *Oides brownigi* with their key, morphological characters, habitat and distributional ranges. Kamaluddin, *et al* (2010) described the external morphology of *Cicindela* from Pakistan. Rizvi and Kamal (2011) describe complex of *Oides neobengalensis*. Rizvi and Kamal (2011) describe external morphology of *Oides neobengalensis*.

1. *Oides affinis* Jacoby (Fig. 1)

Body shape and colouration: Body oblongated general colour shining brown, except black 6th to apical antennal segments tarsi, 3/4th of tibiae, abdominal sternite, a median large vertical elytral patch.

Head: Head slightly broader than long anteooculer distance short, about 1/3rd the length posterior of head including eyes, length anteooculer distance, 1.5mm posterior of head including eyes, 0.75mm, width of head 1.5mm, interocular distance 0.75mm, antennae 11 – segmented 1st to 4th cylindrical, 5th to 10th serrated, last club shaped, length of segments 1st .1mm, 2nd 1.5mm, 3rd 0.25mm, 4th 0.3mm.

Thorax: Pronotum almost rectangular-shaped, anterior margin concave, posterior margin convex distinctly broader than long, length of pronotum 1.75mm, width 2.25mm, scutellum small triangular -shaped, slightly broader than long, length of scutellum 0.25mm, width 0.35mm, elytra large broad from middle to base, apex rounded, length of elytra 4.0mm, width of elytra 2.0mm.

Abdomen: Abdomen convex beneath basal segment posterior - medially broader, Total body -length 7.15mm.

Male genitalia: Aedeagus Fig.2 with median lobe narrowed, basal lobe medially constricted, anteriorly rounded, apical lobe large broad ventrally with a plate- like thecal appendage distally truncated, dorsally with a large club-shaped thecal appendage, membranous conjunctival lobe large.

Material studied: Two males, Pakistan: KPK, Abbotabad, 1. 9. 2003, on light. det. Syeda Ghazal Rizvi, lodged at authors supervisor collection.

Comments: *Oides affinis* is closely related to *Oides andrewsi* by their similar characters like elytra reddish with a large vertical spot and abdomen exposed at repose but it can easily be differentiated by median vertical black spot very broad cover half of the elytral area, posterior of head including eyes about 5 times of anteooculer distance and by other characters as mentioned in key and description.

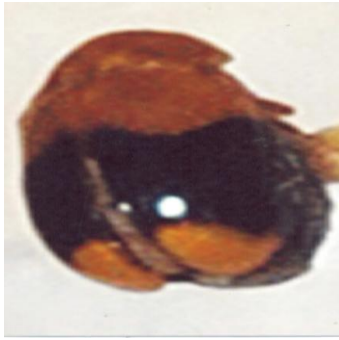


Fig.1. *Oides affinis*

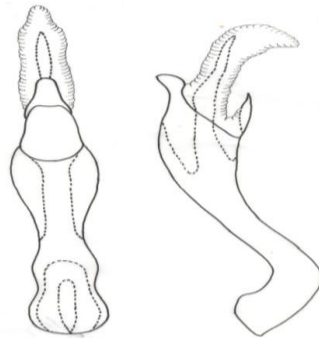


Fig.2. Male genitalia of *Oides affinis*



Fig.3 *Oides andrewsi*

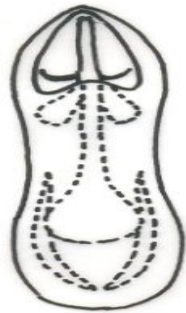


Fig.4. Male genitalia

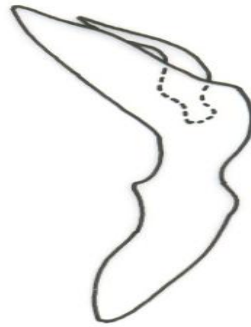


Fig.5. Male genitalia

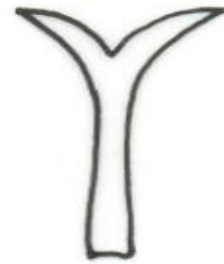


Fig.6. tegumen



Fig.7. Male genital plate



Fig.8. *Oides bengalensis*

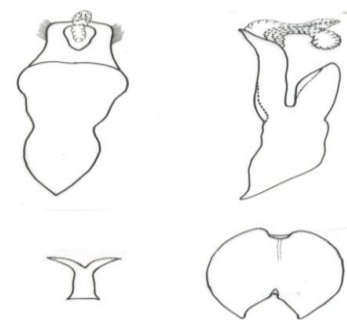


Fig.9. Male genitalia of *Oides bengalensis*



Fig.10. *Oides flava*



Fig.11. Female genitalia of *Oides flava*



Fig.12. *Oides livida*

Oides andrewsi (Fig. 3)

Body shape and colouratin: Body oblongate, pale brown except one median vertical somewhat rectangular-shaped black patch on each elytra (Fig 3).

Head: Head slightly broader than long, somewhat rectangular-shaped, anteculer distance short, slightly more than $1/3^{\text{rd}}$ the length posterior of head including eyes , length anteculer distance 0.35mm, Posterior of head including eyes 0.9mm ,width of head 1.4mm, inter ocular distance 1.0mm, antennae mutilated.

Thorax: Pronotum almost rectangular-shaped, anterior margin, concave , lateral margins convex, humeral angles rounded, width of pronotum distinctly more than length of pronotum , length of pronotum 1.5mm, width 1.5mm, scutellum small, triangular-shaped, about as long as broad. scutellum small, triangular-shaped, about as long as broad, length of scutellum 0.2mm, width 0.25mm, elytra large, broadly elongated with rounded basal margin, apex narrowly rounded, length of elytra 4.5mm, width 1.25mm.

Abdomen: Abdomen convex beneath basal segment medially produced into acute process, apical segment posteriorly convex. Total-body length 8.25.

Male genitalia: Aedeagus (Fig. 4) medially constricted, anteriorly broad and rounded, posteriorly narrowed, genital orifices with straight vesica, penial appendage short, hook shaped (Fig 4 & 5), tegumen (Fig. 6) Y-shaped, anteriorly rod like, posteriorly with acute apex, genital plate (Fig.7) triangular, laterally sinuated, anteriorly with blunt end.

Material studied: Two males, Northern area, Gilgit, 1. 9. 2002, on wild bush, det .S. Ghazala rizvi, lodged at author's collection.

Comments: *Oides andrewsi* is closely related to *Oides affinis* by their similar characters like pronotum reddish and abdomen exposed at repose but it can be differenciated by width of head slightly more than its length, aedeagus curved with indistinct thecal appendage and by other characters as mentioned in key and description.

2. *Oides bengalensis* Maulik, 1936, Faun. Brit. Ind. 4 :110 (Fig. 8)

Body shape and colouration: Body moderately oblongated generally reddish orange except black head, antennae, scutellum, pronotum and very small basal and posterior-medium large vertical black patch on each elytra.

Head: Head slightly longer than broad, anteculer distance very short about $1/10^{\text{th}}$ of posterior of head including eyes, length anteculer distance 0.2mm, posterior of head including eyes 2.2mm, width of head 2.25mm, interocular distance 1.2mm, antennae, 11- segmented,length of segments 1^{st} segment 0.35mm, the other segments mutilated.

Thorax: Pronotum almost rectangular-shaped, anteriorly sinuated, postero-laterally sinuated, lateral margins convex, anterior angles acutely produced, humeral angles rounded, width of pronotum more then 1.25X of its length, length of pronotum 2.35mm, width 3.35mm, scutellum small triangular shaped, width slightly larger than its length, length of scutellum 0.85mm, width 1.0mm ,elytra large, broad at base, apically narrowed, length of elytra 6.5mm, width of elytra 3.25mm.

Abdomen: Abdomen convex beneath, basal segment, medially produced into acute process, apical segment posteriorly convex. Total body- length 11.25mm.

Male genitalia: Aedeagus (Fig.9) with median lobe broad, almost spherical with posterior margin sinuated, basal lobe medially constricted and anteriorly obtusely produced, apical lobe anteriorly broad, posteriorly narrowed with acute apex, genital orifices oblongated with large membranous conjunctival lobe apically bifurcated, ventral lobe globular vesica large curved, tegumen (Fig. 8) Y -shaped anteriorly broad, genital plate (Fig. 8) somewhat oval -shaped, laterally convex, postero-laterally acutely produced.

Material studied: Two males, Azad Kashmir, RawlaKot, 18-6-2010, on wild bushes, leg. S. Ghazala Rizvi, lodged at author's supervisor collection.

Comments: This species is most closely related to *Oides neobengalensis sp. nov.* in general appearance and vertex of head smooth and impunctate but it can easily be separated from the same in having the basal spot on

elytra very short, tegumen very short with broad base and by the other characters as noted in the key and description.

3. *Oides flava* Oliver (Fig. 10)

Adorium flavum Oliver, 1801, Syst. Eleuth. 1: 410; 1807, Entomologie. 5: 611

Oides inornate Baly. 1879, Cist Ent. 2: 444

Oides albicans Duviver 1884, notes, leyd. Mus. 6: 234

Oides flava Maulik, 1936, Faun. Brit. Ind. 4: 108

Body Shape: Body oblongate, pale brown, except dark brown basal five antennal segment and eyes.

Head: Head with vertex smooth much broader, length antecular about 1/3rd the posterior of head including eyes, length antecular distance 0.25 mm, posterior of head including eyes 0.75 mm, width of head 1.25 mm interocular distance 1.5 mm, antennae mutilated.

Thorax: Pronotum almost rectangular-shaped anterior margin concave, posterior margin convex, anterior angles toothed, humeral angles rounded, width of pronotum much broader than its length, length of pronotum 1.25 mm, width 1.75 mm, scutellum small, somewhat triangular-shaped, slightly broader than long, length of scutellum 3 mm, width 3.5 mm, elytra narrowed at base, lateral margins straight, apex rounded, somewhat truncated, length of elytra 4.75 mm, width 1.5 mm.

Abdomen: Abdomen convex beneath, basal segment medially produced into rounded process, apical segment posteriorly convex. Total body length 6.90 mm.

Female genitalia: Spermatheca (Fig. 11) short fusciform, distally broad, gradually narrowed to wards proximal end.

Material studied: Two females, Pakistan, Muree, on light 20.10.2001 det. Syeda Ghazala Rizvi, lodged at author supervisor's collection.

Comments: *Oides flava* is closely related to *oides livida* by their similar characters like body unicolor, reddish brown without spot but it can be differentiated by length posterior of head including eyes 3-times the length antecular distance width of scutellum slightly longer than its length and by other characters as mentioned in key and description.

4. *Oides livida* Weber (Fig. 12)

Oides livida weber, 1801, Obs. Ent.: 53; Weise, 1992, Tijdscher. Ent. 95.: 57; Maulik, 1936, Faun. Brit. Ind. 4: 121.

Body Shape and colouration: Body moderately ovate generally fuscous, except reddish brown lateral and posterior margin of elytra.

Head: Head length slightly longer than half of its width, length antecular distance 0.15 mm, posterior of head including eyes 0.60 mm width 1.25 mm, interocular distance 1.1 mm, antennae mutilated.

Thorax: Pronotum almost rectangular-shaped, anterior margin concave, anterior angles acutely produced, humeral angles rounded, width of pronotum about 2 times the length of pronotum, length of pronotum 1.5 mm, width 2.9 mm, scutellum small triangular-shaped much broader than long, length of scutellum 0.55 mm, width 0.75 mm, elytra large broad at base, apically rounded, length of elytra 5.5 mm, width 2.5 mm.

Abdomen: Abdomen convex beneath, basal segment, medially produced into acute process, apical segment, posteriorly convex. Total body length 7.5 mm.

Male genitalia: Aedeagus (Fig. 13) narrowed, elongated, theca with pair of truncated thecal appendage and pair of pointed thorn-like appendage dilated at base, conjunctiva semisclerotized, proximally rod-like, distally membranous with club-shaped apex.

Material examined: Two males, Pakistan, Ayubia, Kohala road, 8. 10. 1991, on wild bushes, leg. Syed Kamaluddin, lodged at author's supervisor collection.

Comparitive note: *Oides livida* is closely related to *Oides flava* by their similar characters like body unicolors and reddish brown without spots but it can be differentiated by anterior angle of pronotum acute, width of scutellum much broader than its length and by other characters as mentioned in key and description.

5. *Oides neobengalensis* Rizvi and Kamal (Fig. 14)

Oides neobengalensis Rizvi and Kamaluddin, 2011, Pak. J. Enomol. Karachi. 26: 57-60

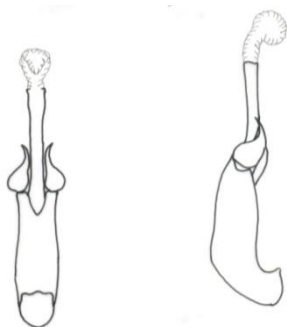


Fig.13. Male genitalia of *Oides livida*



Fig.14. *Oides neobengalensis*

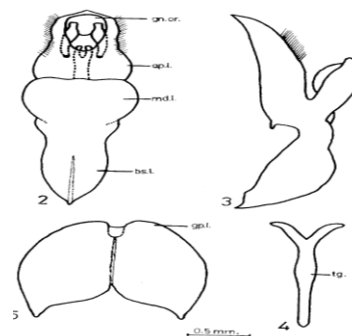


Fig.15. Male genitalia of *Oides neobengalensis*

Body Shape and Coloration: Body moderately oblongated, generally reddish-orange except black head, antennae, scutellum, pronotum, legs, one oval small outer basal patch and one large oblongate medium vertical patch on elytra, abdomen.

Head: Head slightly broader than long, anteocular distance very short, about 1/6 the length of posterior of head including eyes, length anteocular distance 0.40 mm, posterior of head including eyes 2.50 mm, width of head 3.10 mm, interocular distance 1.5 mm, antennae 11-segmented, 1st to 4th segment cylindrical, 5th to 10th segment serrated, last segment club-shaped, 4th segment shortest, basal and 3rd segment equal, 2nd and 5th segment equal and longest. Length of segments ; 1st 0.15 mm, 2nd 0.30 mm, 3rd 1.50 mm, 4th 1.0 mm.

Thorax: Pronotum almost rectangular -shaped, anterior margin sinuated, posterior- medially produced, posterior- laterally sinuated, lateral margins convex, anterior angles acutely produced, humeral angles rounded width of pronotum about 1.5 times of its length, length of pronotum 3.0 mm, width 4.50 mm, scutellum small triangular-shaped, as broad as long length of scutellum 0.60 mm, width 0.60 mm, elytra large, broad at base, medially constricted, apex narrowed somewhat truncated, length of elytra 8.0 mm, width 3.70 mm.

Abdomen: Abdomen convex beneath, basal segment, medially produced into acute process, apical segment posteriorly convex. Total body-length 10.90 mm.

Male genitalia: Aedeagus (Fig. 13 and 15) with median lobe, broad almost spherical with posterior margin sinuated, basal lobe medially constricted and anteriorly obtusely produced, apical lobe anteriorly broad, posteriorly narrowed with sub-acute apex, genital orifices oblongated with a pair of lateral appendages and a median appendage, tegumen (Fig. 15) Y-shaped medially dilated, anteriorly rod-like, genital plates (Fig. 15) somewhat triangular, laterally convex, posterior-laterally acutely produced.

Material Studied: Two males, Azad Kashmir, Rawlakot, 18.6.2010, Wild bush, det. S. Ghazala Rizvi.

Comparitive note: *Oides neobengalensis* sp.nov is closely related to *Oides bengalensis* by their similar characters, general color patterns, vertex of head smooth and impunctate but it can be differentiated by elytra with a small rounded spot at base and a large oval vertical spot at sub-apical margin, second antennal segment about 2 times the 3rd segment, distal lobe with of aedeagus with plate-like appendage and by the other characters as mentioned in the key and description.

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