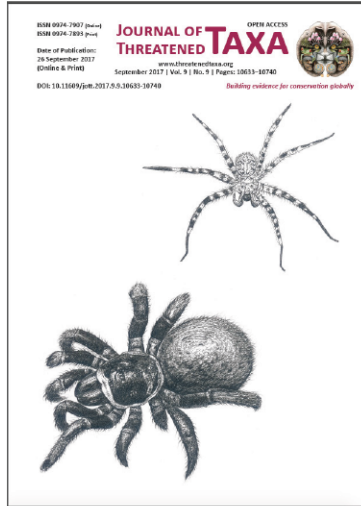


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NOTE

A NOTE ON THREE INTERESTING HETEROPTERA FROM KOLHAPUR, MAHARASHTRA, INDIA

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A NOTE ON THREE INTERESTING HETEROPTERA FROM KOLHAPUR, MAHARASHTRA, INDIA

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Heteropteran fauna of Maharashtra State is still poorly known. After exhaustive work by W.L. Distant, who wrote seven volumes in a series 'Fauna of British India' during 1902–1917, there has been a serious gap in the knowledge about the bugs of India. Many species have not been recorded again since their original descriptions and distribution information of many species is incomplete. Settling the identity of many bugs is still a problem. Pathak et al. (2012) listed Pentatomidae found in Maharashtra and stated that additional surveys would reveal more species in this region.

During a survey of the various localities of District Kolhapur, we came across three very interesting species of bugs that have not been recently recorded from this area or Maharashtra State. The three species were identified using keys in Distant (1902, 1904, 1910): *Cazira verrucosa* (Westwood), *Alcimocoris* sp., and *Ptilocerus* cf. *montandoni* Distant. They were deposited at the Department of Zoology, Shivaji University, Kolhapur. Due to the paucity of museum specimens and unavailability of type material or authenticated specimens, one species has been identified up to genus level only while

one has been identified as close to a described species.

A brief description and illustrations of habitus of all the three species are provided here. All measurements are in mm.

Cazira Amyot & Serville, 1843
[Pentatomidae: Asopinae]

***Cazira verrucosa* (Westwood)
(Images 1–3)**

Material examined: ZSUK.B./52, 1 female, 19.ii.2013, Panhala (16.8157 N & 74.1080 E), Kolhapur, coll. S.M. Gaikwad.

Total length (head to tip of membrane) - 9.5

Breadth at humeral angles - 6.5

General description: Dark reddish-brown, oval bug with bizarre tubercles on the base of scutellum and highly rugulose pronotum. Dorsally mostly reddish-brown, pronotal rugae and antennae light brown. All legs with pale brown annulations on femora and tibia. Tarsi pale brown, underneath entirely red brown, lighter on discal area, darker on lateral side of abdomen; thoracic sterna discally dark brown and laterally with a few pale brown spots and bands.

Head almost as long as broad, moderately declivous; mandibular plates slightly longer than clypeus. A transverse depression making anterior part of head concave, behind which clypeus is convexly raised slightly above mandibular plates; lateral margins strongly sinuate in front of eyes. Eyes large, globular; ocelli prominent, situated on tubercle, closer to eyes than to each other. Vertex between ocelli with two



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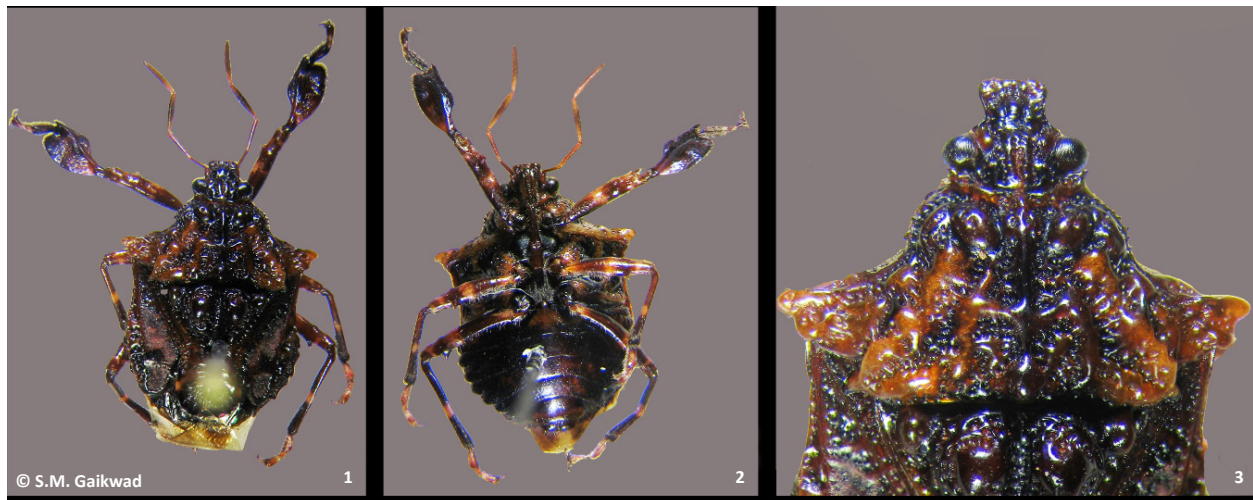
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Images 1–3. *Cazira verrucosa*.

1 - Dorsal view. Note the typical bizzare tubercles on a reddish-brown body; 2 - ventral view; 3 - head and pronotum (magnified). Dorsal view showing large, globular eyes on the head and prominent pronotal angles and strongly developed folds and tubercles on the pronotum.

prominent, small, longitudinal carina; area in between carina deeply punctured, punctures also extend laterally around ocelli. A raised, oblique, pale coloured shining tubercle in front of each eye. Antennae slender, long, I segment not reaching apex of head, II segment longest, III and IV segments sub-equal, IV segment with median dark brown annulation, IV and V stouter than the first three segments and finely setose. Head underneath coarsely punctured on either side of bucelli; labium long almost reaching metacoxae, I segment very stout, I and III segments reddish brown, IV dark brown.

Pronotum broader than long with prominent humeral angles and anterior angles, lateral margins sinuate, posterior margin straight over scutellum. Anterior margin concave behind head. Anterior angle with a prominent spine projecting laterally behind eye. Entire dorsal surface of a pronotum with strongly developed folds and tubercles which are strong and shining; area between folds and tubercles deeply punctured; tubercles and folds near anterior margin dark brown, similarly median carina and posterior median tubercle dark brown, rest of folds pale brown.

All legs slender, moderately long, dark brown and with pale brown annulations, two on each femora and one on each tibia. All legs with prominent femoral, sub-apical spine underneath; mid and hind tarsi pale coloured. Anterior femora with more prominent spine, anterior tibia with dilated oval area which is dark brown distally and pale brown in proximal one third, this expanded portion finely punctured dorsally while smooth and concave ventrally. Anterior tarsi dark brown and more setose than the rest. Sternal regions

mostly dark brown, smooth on disc and finely punctured laterally. Metasternum sulcate; scent gland prominent, its auricle elongate, evaporatorium grey coloured, outwardly limited by coarsely punctured, raised area; lateral parts of metasternum coarsely punctured.

Scutellum long, its basal angle with small tubercle, In between these small tubercles there are two large tubercles separated by a deep groove. Remaining posterior half of scutellum also with smooth raised areas, with concave, bi-lobed and slightly broadened apical area; raised proximal part of scutellum smooth and shining with some deep pits laterally and medio-laterally. Colour pale proximally, dark brown distally.

In hemelytra clavus short with a row of fine punctures, corium with deep punctures marginally and very fine punctures in inner part. Connexivum partly exposed, dark brown. Membrane smoky, extending much beyond tip of abdomen.

Abdomen convex, median region pale coloured, laterally dark brown, median area almost impunctate, lateral area with shallow superficial depressions and punctures; III abdominal segment raised medially and projected forward as small tubercle that touches metasternum; this tubercle distinctly paler than the rest of the abdomen. Female genital segment with fine medial and distal setae.

Alcimocoris Bergroth, 1891 [Pentatomidae:
Pentatominae]

***Alcimocoris* sp.
(Images 4–5)**

Material examined: ZSUK.B./49, 1 female, 17.x.2012, Dajipur (16.3723 N & 73.8636 E), Kolhapur, coll. Y.J. Koli.

Total length - 6.5; Breadth at humeral angles - 8

Oval bug with produced, bidentate pronotal humeral angles. Dorsally mostly dark brown to black with a pattern of ochraceous large spots on pronotum and scutellum with fine intermingling reticulation of the same colouration on clavus, corium and scutellum. These ochraceous areas are all smooth and shining, without any punctures. Head almost vertical, black, with two ochraceous lines along mandibular plates, median ochraceous line on vertex and oblique band lateral to each eye and an oblique spot inside each ocellus. Anterior border of pronotum with the ochraceous band inside of which has two small spots. Ventrally, a characteristic pattern of transverse bands of ochraceous and black.

Anterior part of pronotum and head almost vertical. Head slightly broader than long at the level of eyes, clypeus and mandibular plates of equal length. Lateral margins of head strongly sinuate in front of eye, anterior margin rounded. Mandibular plate strongly punctured on marginal area. Ocelli much closer to eye than to each other. Antenniferous tubercles prominent, situated

underneath but visible from frontal aspect. Antennal segments pale to dark brown. Head underneath dark brown on either side of buccellae; labium long, extending beyond metacoxae.

Pronotum broader than long, strongly declivous in front of area in between humeral angles, sparsely and finely punctured all over except on produced humeral angles and ochraceous spots and bands. Prosternum coarsely punctured, mesosternum with a deep sulcus, almost impunctate on disc, lateral areas coarsely punctured. Metasternum very narrow with lateral part coarsely punctured. Scent gland prominent, evaporatorium well developed, black.

All legs mostly ochraceous, moderately stout and short. All femora with a pattern of black spots and longitudinal bands in distal two-thirds; all tibia with a longitudinal dark brown bands; all tarsi mostly brown, claws dark brown distally or apically.

Scutellum very long, extending much beyond outer angle of corium, broad, margin doubly sinuate, surface sparsely but coarsely punctured except in certain areas. In hemelytra clavus short, corium coarsely punctured in black area, ochraceous area without punctures; membrane dark brown, apical smoky.

All abdominal segments broader than long, impunctate on disc and finely punctured laterally only in dark brown or black area, ochraceous area impunctate. Abdominal sternites with typical coloration. Genital segments (female) entirely black, coarsely punctured.



Image 4. *Alcimocoris* sp., dorsal view. Note the bidentate humeral angles and large spots on pronotum and scutellum. Image 5. *Alcimocoris* sp., ventral view showing ochraceous legs and punctured sternum.

Genus *Ptilocerus* Grey, 1831 [Reduviidae: Holoptilinae]

***Ptilocerus* cf. *montandoni* Distant, 1910
(Images 6–9)**

Material examined: ZSUK.B./52, 1 female, 27.vii.2013, Tamgaon (16.6473 N & 74.3033 E), Kolhapur, coll. S.M. Gaikwad.

Total length - 6.8; Head breadth at eyes - 1.1; Breadth of pronotum at anterior angles - 0.62; Breadth of pronotum at humeral angles - 2.4

Ochraceous, pronotum slightly darker. Membrane with large brownish spot at base. Membrane with few pale brown spots. Ventrally ochraceous, a dark brown horse shoe shaped mark on trichome and posterior half of all abdominal sternites pale brown to dark brown, genital segments dark brown. Entire body, especially antennae, head, pronotum, scutellum, corium and legs covered with long, dense pale ochraceous setae. Membrane without setae. Trichome prominent,

elevated, setose but surrounding area anteriorly and laterally without setae.

Head broader than long, dorsally flattish; ocelli widely separated, eyes large, prominent. Antenniferous tubercles prominent, broad; I antennal segment very broad and short, almost globose at base, II segment long, moderately stout and densely setose, each seta with a prominent basal tubercle, III and IV antennal segment lost. Head narrow behind eyes, this narrow portion with lateral series of setae that have dark brown base, setae also slightly darker. Area in between eyes covered with long ochraceous setae. Ventrally, labium stout, I segment very long and broad, II and III much shorter. Lateral side and underside of labium with somewhat darker long setae, labium also darker reddish-brown. Labium terminates in front of fore coxae in prosternal depression.

Pronotum broader than long, lateral margin slightly sinuate, humeral angles rounded, anterior margin slightly concave, posterior margin straight. A row



Images 6–9. *Ptilocerus* cf. *montandoni*
6 - Dorsal view. Note the pale ochraceous setose body with the large brownish spot at the membrane base; 7 - Ventral view; 8 - Close up of setose head and pronotum. Dorsal view showing large prominent eyes, antennae on the head and lateral rounded humeral angles and median depression of pronotum; 9 - Abdomen (magnified). Ventral view showing prominent, elevated and setose trichome.

of black tubercles just behind anterior margin. Each tubercle wearing long setae, continuous with this black line of tubercles, there is a group of 4–5 black tubercles laterally, each wearing somewhat darker seta. Callar area not seen. Anterior half of pronotum distinctly sloping, posterior half flattened but with a median longitudinal depression, giving its lateral area a slightly raised appearance. Entire dorsal area covered with long horizontal setae. Prosternum medially sulcate, short, meso and metasternum also short. Posterior margin of metasternum with long setae, discal area of all sterna without long setae.

Scutellum triangular also covered by long setae at its margin. Corium small, distinguishable from membrane due to very long setae covering the entire area, setae long extending over on to membrane; membrane itself without setae. Overall hemelytra much longer than the tip of abdomen.

Abdomen slightly convex ventrally, flat dorsally. Segment II and III fused forming elevated, setose pad mid-ventrally slightly behind hind coxae (= trichome). The remaining abdominal sternites also setose. Abdominal segments beyond V gradually narrowed; spiracles not easily visible due to the extremely pilose nature of the body.

Legs moderately stout, densely setose, all femora moderately swollen. Tibia straight or terete. Hind tibia with a dense brush like arrangement of long setae all over. All legs uniformly of same colour with femora only slightly darker at base.

Discussion

Among the three species illustrated and briefly redescribed here, *Alcimocoris* sp. is different than the three [*A. coronatus* (Stal, 1876), *A. flavicornis* (Distant, 1887) and *A. parvus* Distant, 1902] mentioned by Distant (1902). There are several other species under this genus and the information about them is too scanty to identify this species. A recent paper on pentatomids of southern India also listed *A. coronatus* but illustrated

one specimen as *Alcimocoris* sp. (Salini & Viraktamath 2015). Until the time more material, especially male, is available we treat this only as *Alcimocoris* sp.

Cazira verrucosa is widely distributed and known from Malabar (Distant 1902) but has not been reported from Maharashtra State as such. Its presence in Kolhapur is a new record. This is a predatory bug feeding on the larvae of Lepidoptera and a useful biocontrol agent wherever present, like other asopine genera.

Ptilocerus montandoni was described from Kandy in Ceylon (=Sri Lanka) and has never been recorded from India (see Ambrose 2006), although we share many bugs and other insects with Sri Lanka. It is probably a rare and cryptic species as it has not been recorded for a long time even from Sri Lanka in recent years. We are calling this *P. cf. montandoni* as there is a minor difference (Hemant V. Ghate had compared it with the type photo obtained from Dr. C. Weirauch, USA; Hemant V. Ghate pers. comm. 2016). In any case, the genus is also not known from India so this forms another first record for Maharashtra and India.

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