

Distribution : INDIA : West Bengal (Darjeeling district).

Remark : 1 ♀ collected from West Bengal : Ultadanga by author, under bark of Sirish log has been studied and observed the following differences :- anterior margin of prothorax curved at extremities and continues to form the anterior spines, meeting point of anterior margin of prothorax and that of anterior spine not sharply demarcated (Fig. 92).

Genus Ahasverus Gozis

Ahasverus Gozis, 1881, Annls Soc. ent. Fr. (6) 1 Bull.

p. CXXVII; Reitter, 1911, Fauna Germanica 3 : 45;

Grouvelle, 1912, Annls Soc. ent. Fr. 81 : 372-385.

Cathartus (Ahasverus) Gozis : Reitter, 1882, Dt. ent. Z.

26 : 296; Ganglbauer, 1899, Die Käfer Von Mitteleuropa

3 : 587; Grouvelle, 1908, Annls Soc. ent. Fr. 77 : 492.

Type-species : Ahasverus advena (Waltl)

The genus Ahasverus was erected by Gozis (1881) for the species Cathartus advena (Waltl). Reitter (1882), Ganglbauer (1899) and Grouvelle (1908) considered it as a subgenus of Cathartus Reiche. Reitter (1911) re-established its generic status. This genus seems to be more diversely represented in temperate climate and often found in mouldy stored foods. Stebbing (1914) recorded this species in India from Madhya Pradesh,

Maharashtra and Tamil Nadu. Imms and Chatterjee (1915) also recorded this species from India. Hetschko (1930) in Junk's "Coleopterorum Catalogus" listed eleven species under this genus namely, advena (Waltl) (Cosmopolitan), cryptophagoides (Reitter) (U.S.A.), de-launeyi (Grouvelle) (Guadeloupe), excisus (Reitter) (West Indies, India, Guatemala, Germany, Natherland), humeralis (Grouvelle) (Guadeloupe, St. Thomas, U.S.A.), longulus Blatchl. (U.S.A.), nausibioides Grouvelle (French Guyana), opaculus (Leconte) (U.S.A. and Mexico), plagiatus Grouvelle (Antillen), rectus (Leconte) (U.S.A.), subopacus Grouvelle (Brazil, Bahia). The species A. excisus (Reitter) listed in the Junk's "Coleopterorum Catalogus" from East Indies, but Dr. Halstead has informed the author in a personal communication that this is a West Indian species, not East Indies as mentioned in the catalogue. In the present study the detailed distribution of Ahasverus advena in Indian and the description of its larva is given (see p.279)

Ahasverus is closely related to the genus Cathartus Reiche but can be easily separated by the following characters :

AHASVERUS	CATHARTUS
1. Prothorax transverse, lateral margins curved outwardly, anterior angles produced and callosity-like, sterno-pleural sutures terminate in anterior angles	1. Prothorax elongated, almost parallel-sided, anterior angles slightly produced laterally, sterno-pleural sutures terminate in lateral margins

AHASVERUS	CATHARTUS
2. Antennal joint 9 distinctly narrower than joint 10	2. Antennal joint 9 slightly narrower than joint 10
3. Elytra ovoid	3. Elytra parallel-sided
4. Femoral lines on ventrite 1 opened.	4. Femoral lines on ventrite 1 closed.

Definition :

General appearance (Fig.107) elongated, moderately flattened, usually yellowish brown.

Head (Fig. 109) slightly transverse, front margin of clypeus almost straight, eyes moderately large and coarsely faceted, temple short and flattened beneath eye, transverse impressed line on vertex behind eyes absent, tentorium as seen in figure. Antenna short and slender, antennal insertions hidden under projection of frons, 11-jointed, scape broadly elongated, joints 2-8 subequal and narrower than scape, club 3-jointed. Mandible (Fig.116) elongated with 3 apical teeth, mola well-developed, a trace of dorsal mandibular cavity present near base. Maxilla (Fig.117) with lacinia narrow and elongated and without apical spine, galea short and broad and its apex densely hairy; palpi with segments 2 and 3 nearly equal, apical segment longest and fusiform. Labium (Fig. 118) with mentum somewhat triangular and transverse, palpi with apical segment longest and slightly narrowed towards apex. Labrum (Fig. 119) with apical margin rounded.

Prothorax (Fig. 110) transverse, lateral margins finely serrated, front angle projected and forming a callosity-like structure, pronotum slightly convex, front coxae narrowly separated, coxal cavities almost rounded, cavities broadly closed behind externally and internally, prosternal process broad at apex and its apical margin almost straight, sterno-pleural suture extending to front angle.

Meso-metathorax (Fig. 112) : Mesocoxae narrowly separated, cavities broadly opened outwardly, lateral margins of mesosternal process notched near apex, sternal fitting between mesocoxae almost in a straight line. Metasternum transverse, median impressed line extends anteriorly upto apex of mesosternal process, hind coxae widely separated. Metendosternite simple and represented by two appophyses.

Wing and Elytra : Wing (Fig.115) with trace of single anal vein and radial cell, without anal cell and subcubital fleck. Elytra somewhat ovoid, each elytron (Fig.114) with 9 rows of strial punctures, without scutellary striole, alternate interstices with 2 and 3 rows of setae.

Legs (Fig. 111) moderately long and slender, trochanters short and simple, femora swollen towards middle, tibiae not broadened at apex and with two apical spurs; tarsal formula 5-5-5 in both sexes, tarsal segments 1-3 short and subequal, segment 3 strongly lobed below, segment 4 shortest, claws simple.

Abdomen (Fig.113) elongated, ventrite 1 longest, intercoxal process of ventrite 1 broad and broadly pointed at apex, femoral lines opened, ventrites 2-5 shorter and subequal. Aedeagus (Fig.120) with median lobe broad, median sturt elongated and broad at apex; parameres well-developed, slender, broadened near middle and narrowed at apex, and with a long apical seta. Ovipositor (Fig.121) with well-developed paraprocts, valvifers, coxites and styli attached on outer margin of apex of coxites.

Habitat : It has been recorded from stored grains and cereal products, copra, spices, cocoa, ground nuts, other oil seeds and their products, tobacco, herbs, roots and haystack. In India Ahasverus advena has been recorded in lac, teak leaf, Shorea robusta seeds, ship biscuits, stored rice and plum.

Distribution : Diversely represented in temperate climate, the species A. advena is cosmopolitan.

26. Ahasverus advena (Waltl)

Cryptophagus advena Waltl, 1832, Faunas 1 : 169 (Type-loc. : 'America-Australi').

Cathartus advena (Waltl) : Waltl, 1834, Silberm. Rev.

Ent. 2 : 256.

Silvanus advena (Waltl) : Erichson, 1846, Naturg. Ins.

Deutschl. 3 : 339; Wollaston, 1854, Insecta Maderensia :

168; Casey, 1884, Trans. Am. ent. Soc. 11 : 72.

Cryptophagus guerinii Allibert, 1847, Rev. Zool. 10 : 12.

Cryptophagus angustatus Lucas, 1846, Explor. Alger. : 221.

Cryptophagus ? striatus Rouget, 1876, Annls Soc. ent. Fr.

(5) 6 Bull. p. CCVII.

Ahasverus advena (Waltl) : Gozis, 1881, Annls Soc. ent.

Fr. (6) 1 Bull. p. CXXVII; Reitter, 1911, Fauna

Germanica 3 : 47; Grouvelle, 1912, Annls Soc. ent.

Fr. 81 : 381.

Cathartus (Ahasverus) advena (Waltl) : Ganglbauer, 1899,

Die Kafer Von Mitteleuropa 3 : 588; Grouvelle, 1908,

Annls Soc. ent. Fr. 77 : 492.

Waltl (1832) described this species under Cryptophagus Herbst. Woodroffe (1962) noted that though it is originally an American species but it has been distributed by commerce to most of tropical and warm-temperate regions of the World. Corbett, Yusope and Hassan (1937) noted that this species is a mould feeder rather than a direct destroyer of stored food stuffs. Stebbing (1914) mentioned that this species makes gall in teak leaf and cause defoliation, and he recorded this species from Madhya Pradesh, Maharashtra and Tamil Nadu. Imms and Chatterjee (1915) mentioned that A. advena attacks lac insect in India.

General appearance (Fig. 107) elongated, moderately depressed, yellowish to reddish brown, somewhat shiny; covered with short, semierect, golden pubescence.

Head : Exposed part of head wider than long, eyes moderately large, length of eye about one-third of length of head, length of temple shorter than width of one eye facet and its outer apical angle pointed, puncturation on vertex fine and dense and that of towards anterior margin of clypeus slightly finer, setae projected towards middle line. Antenna rather short and slender, considerably shorter than length of head and prothorax together (1.00 : 1.25), scape moderately large, pedicel about as long as scape and slightly narrower, joint 3 slightly shorter and narrower than pedicel, joints 4-8 shorter and subequal, joint 9 slightly transverse and distinctly narrower than joint 10, joint 11 slightly transverse and slightly narrower than joint 10. Prothorax transverse and convex; anterior angle prominent, produced slightly towards lateral side and its tip broadly rounded; lateral margins uniformly arched and finely serrated, pronotum narrowly bordered, puncturation on pronotum fine and dense and similar to that of vertex of head, setae projected towards middle line. Scutellum moderately large, transverse and pubescent. Elytra elongated and somewhat ovoid, lateral

margins slightly explanate and not wavy, rows of punctures slightly deep and moderately large, pubescence denser than on head and pronotum and projected posteriorly. Puncturation on ventral side similar to that of dorsal side. Aedeagus (Fig. 120) with parameres broadened across anterior two-third and narrowed posteriorly, each paramere with a long and a short apical setae.

Measurements : Total length 1.36-2.23 mm, width of head across eyes 0.47-0.52 mm, length of antenna 0.58-0.72 mm, width of prothorax across middle 0.55-0.67 mm, length of elytra 1.11-1.41 mm and width across middle 0.66-0.83 mm.

Materials examined : 76 ex. INDIA : WEST BENGAL, Calcutta, 11 ex., 31.vii.1965, P.K. Ghosh, from copra consignment; 1 ex., 24.viii.1977, Mazumdar, Shorea robusta seed brought from Bankura; BIHAR, Chaibasa, 50 ex., 15.i.1978, T. Sengupta, plum; KERALA, Vellyani, 3 ex., 18.ix.1959, C.N.O., stored rice; 2 ex., 3.ix.1960, C.N. Oomen, stored rice; EUROPE, 9 ex.

Distribution : Cosmopolitan. So far in India this species is recorded from Madhya Pradesh, Maharashtra and Tamil Nadu. In the present study it has been recorded from West Bengal, Bihar and Kerala.