A NEW SPECIES OF *XANTHOENCYRTUS* FROM INDIA

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Recently Nararayanan, Subba Rao and Kaur (1957) recorded a number of interesting genera belonging to the family Encyrtidæ parasitizing the pink mealy bug *Saccharicoccus sacchari* (Cockrell) from Delhi. Further study of the insects in question revealed that while *Astymachus* sp. could not be separated from *Astymachus japonicus* Howard, *Scelioencyrtus* species was found to be new and described as *S. mymaricoides* (1960 MS.). There were a few more specimens which could not be easily separated from *Scelioencyrtus* was later identified as a species of *Xanthoencyrtus*. Further studies have since been made and the new species has been described as *Xanthoencyrtus comperei.*

Xanthoencyrtus comperei, New Species

Female

Length 1·17 mm. to 1·23 mm. Colour: body yellow, margin of the metathorax brown, club dark brown, eyes deep red.

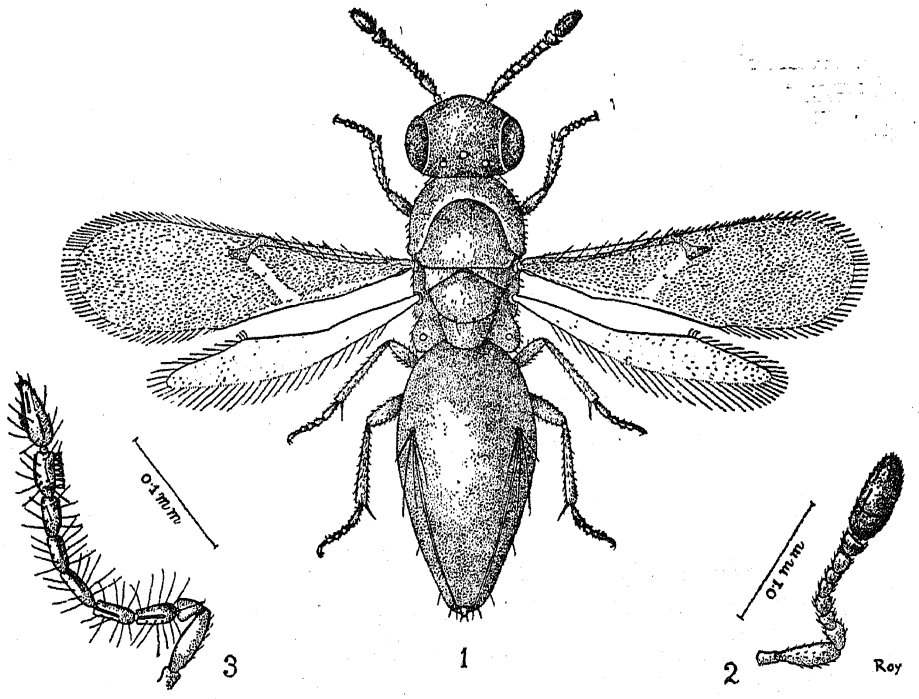
Head rounded, a little wider than thorax, about one and a quarter times longer than wide. Eyes elongate oval, slightly pubescent, inner orbital margins parallel. Cheeks slightly less than half the length of the eyes. Mandibles bidentate, orange yellow. Spines present on the entire surface of the head though stouter and longer on the vertex. Ocelli red, arranged in an obtuse-angled triangle. Interocular space two and a quarter times the interocellar, latter is twice that of the front ocellar and one and one-thirds of ocellocular. Antennæ inserted slightly above the clypeal margin, the sockets about two times their own diameter apart.

Flagellar segments somewhat cup-shaped. The relative lengths of the different components of the antenna are as follows: Scape 14, pedicel 8, flagellar segments 4, 3, 4, 3, 4, 5 and club 20. Antennæ slightly pubescent. Club distinctly two-jointed, the first being about half as long as the second. Sensorial pits are present on the club as well as on the last four flagellar segments though the pits are not so prominent on the flagellar segments.

Thorax.—Finely reticulated though barely perceptible. Hair present all over the thorax but more dense on the prothorax and the part of the mesoscutum. Scutum dome-shaped, larger than the scutellum, one and a quarter times as wide as its median length. Scutellum about one and a half times wider than its median length. Axillae broad, with their inner ends acute and meeting medially. Their scutellar margins somewhat arcuate. A pair of spines are present on the basal margin of the scutum and a pair in the middle of the scutellum. Metathorax narrow. Propodeum very short in the middle region but much longer at the sides. Spiracles circular, situated about one and one-fourth of its diameter away from the side.

Abdomen about one and half times longer than thorax, oblong ovate. Segmentation not very distinct but appears to be six-segmented. Base of abdomen broadly sessile. The vibrissal plates situated a little before the middle of the abdomen with four vibrissæ, of which three are quite long and conspicuous. Paratergites well defined but very narrow. Ovipositor very short, situated at the apex, scarcely protruding.

Wings broad, fully developed and reaching slightly beyond the apex of abdomen. Marginal fringe short. Forewings three times longer than broad. Speculum narrow and oblique, starts from the stigmal downwards and is slightly interrupted in about its middle, then from the lower border



FIGS. 1–3. Fig. 1. *Xanthoencyrtus comperei*, new species. Fig. 2. Antenna, female. Fig. 3. Antenna, male.

continues towards the proximad. Submarginal vein about half the length of the wing. Marginal vein thick but punctiform. Stigmal vein twice the length of marginal. Hind wings seven and half times longer than wide. Cilia on the upper margin very short but on the lower margin three-fourths its greatest width.

Legs.—Typical of the genus. Middle legs comparatively weak and slender, hind legs stouter. Hind tibia equal in length to its femur and trochanter combined. The first two tarsi are equal in length to the next three tarsi.

Male

Length, about 0·94 mm. A little deeper in colour than in female. Essentially similar to the female differing chiefly in antenna and abdomen. Head slightly shorter. Cheeks a little over half the length of the eyes. Antenna broad, the relative lengths of the antennal components are as follows: 25, 10, 15, 15, 12, 12, 15, 28. Flagellar segments cylindrical and each with a long sensorial ridge. The last flagellar segment a little wider than the rest and has a row of about seven funnel-shaped sensorial organs arranged along the longitudinal axis. Long whorls of hairs are prominent on flagellar segments. Club solid, ovate and is as wide as the last funicle.

Described from six females and six males. This species has been named after Dr. Harold Compere of Citrus Experimental Station, California, who has been a source of inspiration to me in my taxonomic work of the family Encyrtidæ.

Holo and allotypes on slides. Collected by R. B. Kaur.

Type locality: Delhi, India.

Host: *Saccharicoccus sacchari* (Cockll.)

Types deposited in the " National Pusa Collection ", Division of Entomology, Indian Agricultural Research Institute, New Delhi.

The genus *Xanthoencyrtus* was erected by Ashmead in 1902. Subsequently Mercet (1918) errected the genus *Pholidoceras*. Apparently though there were no generic differences between the two, Mercet preferred to compare his *Pholidoceras* with *Philoponectroma* Brethes and justified his new genus. Later Timberlake (1919) while describing *X. fullawayi* which had two-segmented club synonymised *Scelioencyrtus* Girault and *Mirastymachus* Ashmead with *Xanthoencyrtus* Ashmead. He also noted that most of his species had three-segmented club, as against the two of Ashmead's genotype. However, he did not discuss the genus *Pholidoceras* and its validity in that

paper. Kryger (1943) described a new species under the genus *Pholodoceras*. He observed that though his species, *i.e.*, *P. jali* had a two-jointed club there were not sufficient generic characters to create a new genus and so he placed it under *Pholidoceras*. It was Ferriere (1953) who actually synonymised *Pholidoceras* Mercet with *Xanthoencyrtus* Ashmead. Alam (1957) in redescribing *Xanthoencyrtus semiaptera* (Mercet) has shown a three-segmented club, though Ferriere had shown only a two-segmented club in his figure. Alam mentions that his specimen was collected from the same locality (Silwood Park) as that of Ferriere. It is evident from the above facts that there is a slight individual variation in the number of segments of the female antenna in *Xanthoencyrtus*. Hence the synonymisation of the two genera is justified. It is also necessary to discuss the generic status of *Scelioencyrtus* Girault in the light of present studies. Timberlake (1919) and again Peck (1951) have synonymised *Scelioencyrtus* with *Xanthoencyrtus*. Unfortunately in all the species that were described under the genus *Scelioencyrtus* no male was described as an allotype. Taking only the female, there is very little to differentiate it as a distinct genus from *Xanthoencyrtus*, though there are some secondary characters like marginal fringe of the wings, etc. However, a number of males reared of the genus *Scelioencyrtus* show a clear and generic difference from that of the males of *Xanthoencyrtus*. On the basis of this antennal structure which is a dominant generic character, we must place Girault's *Scelioencyrtus* as distinct from that of *Xanthoencyrtus*. The generic status of *Scelioencyrtus* has been discussed by Compere, Subba Rao and Kaur (1960).

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