

A NEW CHALCID WITH BRANCHED ANTENNAE FROM SOUTH INDIA. (*TETRACNEMUS INDICUS*, SP. NOV.)

By T. V. RAMAKRISHNA AYYAR, B.A., Ph.D., F.Z.S.

Very few groups of insects can approach the Hymenopterous division Chalcidoidea in numerical strength, economic importance and the possession of remarkable morphological and ecological characters. In the Encyrtine sub-division of this group seven or eight genera have so far been described as having curiously branched antennae; all these have been discovered so far in Europe, Australia and America, and none have so far been described from India. During the course of my studies on the parasitic Hymenoptera of South India I happened to rear out an interesting form with branched antennae belonging to the above group. This insect in its generic characters agrees with *Tetracnemus*, West., but differs materially from the only known species of the genus, and is described below as *Tetracnemus indicus*, sp. nov.

The first example of an Encyrtine Chalcid with branched antennae was described as early as 1837 by Westwood under the name of *Tetracnemus diversicornis* and for nearly fifty years this was the only species known with branched antennae. Later on, other forms were discovered and at present we have eight known genera which may be brought under the tribe Tetracnemini erected by Howard¹ in his interesting paper on these insects. In this paper six genera—*Tetracnemus*, *Tanaostigma*, *Calocerinus*, *Tetraclidia*, *Pentacnemus* and *Hexaclidia* are described; since its publication Howard² has described another new genus *Tetracnemoidea*, while Timberlake has added another new genus *Hexacnemus*. With the exception of *Hexaclidia* the other seven genera known so far are monotypic. The new species *Tetracnemus indicus* described in this paper is the second species of the genus *Tetracnemus*—the oldest genus of the Tetracnemid Chalcids.

***Tetracnemus indicus*, sp. nov.**

Male.—Length 1.1 mm. General colour grey brown with the limbs of a paler hue; parts of mesonotum and posterior region of abdomen of a darker tinge; eyes black; ocelli brownish; antennae with the scape almost white, the 2nd joint (pedicel) brownish; other joints and branches pale grey; mandibles light grey with brown tips; thorax grey-brown; legs yellowish white with hind femora and tibiae tinged with grey-brown; wings hyaline with the veins and setae dark brownish; abdomen grey-brown, its posterior region darker.

Head hemispherical, broader than long, broadest across the eyes; anterior margin arched and with two conspicuous sharp projections on each side of the median line; surface of head finely reticulate in places. Antennae almost as long as head and thorax, scape projecting far beyond anterior margin of head, of almost same breadth throughout; second joint (pedicel) short, globular, narrower at base; the two ring-joints very small and inconspicuous. Each of the four succeeding joints

(funicular) drawn sideways and forwards into a long branch; each branch or ramus more or less bent forwards towards the base of the antennal club; ramus of first funicular joint constricted at base, its basal portion broader and as long as the next joint; base of 3rd joint longer than that of either the first or the second and shorter than that of the fourth, which is the longest of the four branched joints; fifth funicular joint without any branch, slightly longer than the base of fourth. Club elongate, ovoid. Funicular joints, their branches and club fringed with long hairs. Thorax massive, surface faintly reticulate. Wings with the veins set with sharp short spines, surface covered with minute setae. Abdomen elongate-oval, almost as long as thorax but narrower; segmental divisions faintly visible, lateral hair tuft (vibrissae) on 3rd abdominal segment fairly long.



TEXT-FIG. 1.—*Tetracnemus indicus*, sp. nov. Head with antennae.

Measurements of type 1.1 mm.; head length .330 mm.; breadth .462 mm.; thorax length .352 mm.; abdomen length .370 mm.; antennal length .616 mm.; length of antennal joints scape 176 μ , pedicel 50 μ ; funicular joints, I 30 μ , II 40 μ , III 75 μ , IV 85 μ , V 105 μ and club 140 μ .

Habitat.—Three males were bred by the author as parasites of an injurious mealy bug, *Pseudococcus citri* C., commonly noted on Agathi (*Sesbsnia aculeata*) in Coimbatore. The host, mealy bug, is also a common pest of other plants such as coffee, cocoa, etc.

This species differs from the type-species *T. diversicornis* of Westwood in colour, and in the structure and size of the antennal joints and branches.

Type No. $\frac{760}{H3}$ in the collection of the Zoological Survey of India.

LITERATURE.

1. Howard, L. O. Insects of the subfamily Encyrtinae with branched antennae. *Proc. U. S. Nat. Mus.*, Vol. XV, pp. 361-369 (1892).
2. Howard, L. O. On some new parasitic insects of the subfamily Encyrtinae. *Proc. U. S. Nat. Mus.*, Vol. XXI, pp. 231-248 (1898).