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GYNACANTHA PALLAMPURICA SP. NOV. FROM NORTHERN HIMACHAL PRADESH, INDIA (ODONATA : AESHNIDAE)

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INTRODUCTION

Fraser (1936) provided a comprehensive account of *Gynacantha* species known from the then 'British India'. Navas (1930), Lieftinck (1960), Mitra and Lahiri (1975) and Asahina (1984) added a few more species to the genus. Hämäläinen et al. (1999), Lahiri (1987), Lahiri and Mitra (1993), Mitra (1995, 2006), Prasad (2002) and Prasad and Vershney (1995) among others also worked on the genus from different parts of India and as a result of contribution of all the above workers the genus *Gynacantha* Rambur turns out to be the most populated aeshnid genus of Indian dragonflies known from the main land and the Andaman and Nicobar islands. One more species, e.g., *G. pallampurica* sp. nov. has been added to Indian fauna in this communication together with collection data, illustration of relevant body parts and comparative notes in the text.

SYSTEMATIC ACCOUNT

Gynacantha pallampurica Lahiri and Walia sp. nov.

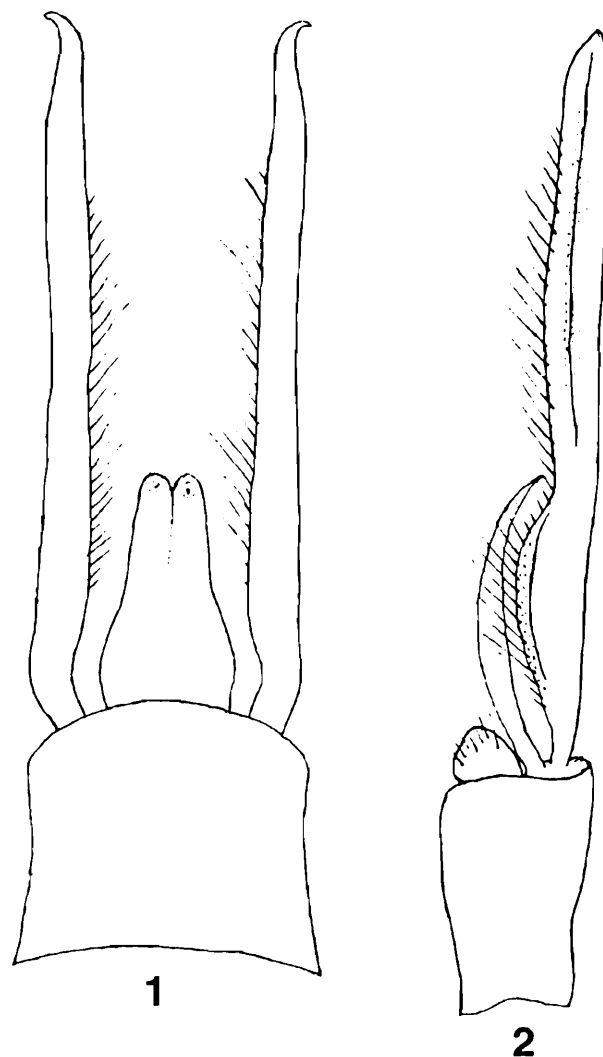
(Figs. 1-6)

Description : Male : Face and ventral side of body greenish yellow, dorsum of thorax and abdomen light blackish brown. Crest of frons marked by a black T shaped mark with subacute tips of its frontal arms extending half way to lateral edges of the frons; base of the black T narrowing at sulcus but then again expanding around ocelli. Front of thorax marked by a longitudinal triangular narrow greenish yellow streak on either side along the front part of humeral suture. Legs pale brown, flexor surface of femora blackish in apical half. Wings hyaline; primary antinodals the 1st

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and the 5th in forewing, the 1st and the 6th in the hindwing; Antenodals : forewing : 17-21, hindwing : 13-15; Postnodals : forewing : 15-18, hindwing : 16-18; anal triangle 3 celled; discoidal cell 5 celled; 8 cubitals in forewing, 7 in hindwing. Abdomen greenish yellow on lower parts of sides and beneath, black on dorsum with bluish markings as follows : segments 2 to 8 with narrow oblique transverse spots at jugal sutures and segments 3 to 8 with subapical triangular spots on either side, the subapical spots progressively growing larger in segments situated more apically; ventral greenish yellow expanded on 2nd segment to cover the oreillets and on segments 9 and 10 to reduce dorsal black on latter segments to mid-dorsal narrow stripes; apical margin of oreillets armed with a row of 6 to 8 minute teeth. 3rd segment markedly constricted – the point of constriction being about half the width of the segment at base : 2nd segment with an additional pair of greenish yellow spots on mid-dorsum; dorsum of segments 8 and 9 black from base to apex but the black constricted medially by expansion of ventral yellow; superior anal appendages black, about two and a half times as long as the segment 10 of abdomen, rather narrow organs extending straight backwards, slightly curved outwards on its long axis as seen from dorsum with bluntly pointed



Figs. 1-2. : *Gynacantha pallampurica* sp. nov., male;
1 & 2. anal appendages, 1. dorsal view, 2. lateral view.

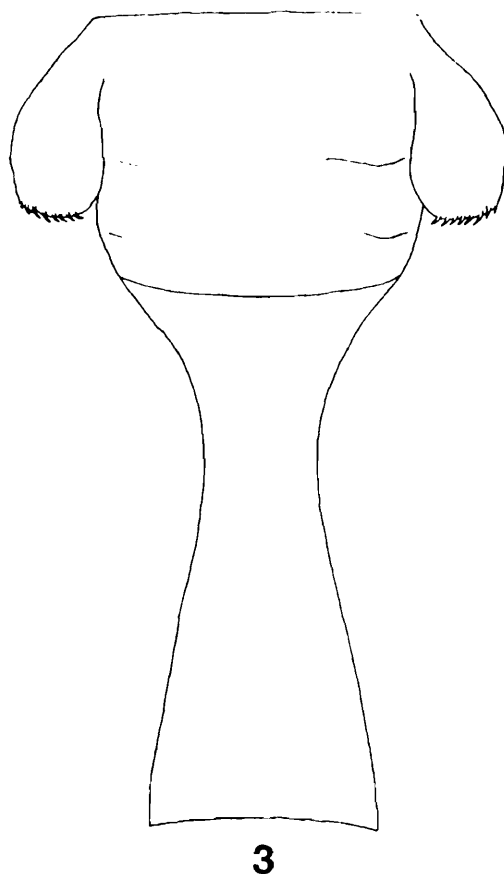


Fig. 3. : *Gynacantha pallampurica* sp. nov., male;
3. basal abdominal segments including oreillet, in dorsal view.

apex turned a little outwards; in lateral view the superiors again appear narrow organs with the pointed tip as well as the organs itself directed straight backwards, the apical half somewhat tubular and rather smooth, marked by a lateral ridge, the basal third marked by a bulging visible only in lateral view and somewhat rough in appearance; the inferior anal appendage is about one third the length of the superiors, yellow and broadly triangular as seen from dorsum, the apex deeply incised, each part ending in a fine black acute spine pointed upwards; in lateral view curved a little downwards medially to suitably extend beneath the ventral bulging of the superiors; fine, moderately long hairs extend inwards and ventrally from both the superiors and the inferior anal appendages.

Variations : Paratype males exhibit some variations in respect of markings from the Holotype. The black mark on frons may be very faint and obscure; apices of wings enfumed with brown; black on dorsum of second abdominal segment invading half way on to sides to include dorsal half of the oreillet; teeth along apical margin of the oreillet including minute ones may be upto ten; second abdominal segment without a pair of greenish yellow spots on mid-dorsum; subapical bluish spots on abdominal segments less prominent; subcostal and median space upto 1st antenodal cross vein brown and apices of wings narrowly enfumed; inferior anal appendage black along its margin.

Female : Similar to male but for sexual characters differing as follows : Frons marked as in Paratype male; wings palely enfumed between node and the pterostigma; Legs unmarked with black; segments three to five with mid-dorsal yellow stripe in basal half narrowing to apex; segment two pale greenish yellow at base upto jugal suture; the blue markings on abdomen evident only on segments 5th and 6th—obscure on other segments; segment one dirty black.

Measurements (in mm) : ♂ : length of abdomen : 41.00–45.00; length of anal appendage : 6.00; length of hindwing : 37.00–39.00; ♀ : length of abdomen : 46.00; length of hindwing : 41.00.

Material studied : Holotype ♂, Andretta (Pallampur, Himachal Pradesh), 29.ix.2004, coll. G. Walia “in the vicinity of a montane stream surrounded by a thick vegetation” (ZSI Regd. No. 3958/H13); Allotype ♀, same data as the Holotype (ZSI Regd. No. 3960/H13) (tip of right forewing lost); Paratype ♂, same data as the Holotype (ZSI Regd. No. 3959/H13); Paratype ♂, same data as the Holotype (ZSI Regd. No. 3961/H13); Paratype ♂, same data as the Holotype (ZSI Regd. No. 3962/H13) (tip of abdomen lost). The Types have been deposited in the National Zoological Collection.

Comparison : *G. pallampurica* sp. nov. comes close to *G. dravida* Lieftinck in having frons marked with black T-shaped marking, in large built and on the shape of the male anal appendages – the inferior being about one third the length of the superiors. However, it differs from the same in having the inferior anal appendages comparatively a little shorter (the superiors about 2.6 times v.s. over 2.75 times as long as the inferior) and in having a unique ventral bulging in the basal third of superiors and in the absence of antemedian bulging of the latter. *G. pallampurica* sp. nov. further differs from *G. dravida* Lieftinck in being a smaller insect (♂ : abd. + ann. App. 47.00–51.00 mm vs 55.00–57.00 mm, hindwing : 37.00–39.00 v.s. 43.00–50.00 mm).

DISCUSSION

Most *Gynacantha* spp. Known from India are distributed in the southern and eastern parts of the union. In comparison, very few species of the genus are known from the northwestern region. Prasad (2002) in his detailed account of the odonate fauna of western Himalayas reported only *G. khasiaca* MacLachlan from western Himalayas (comprising the states of Kashmir, Uttar Pradesh and the Himachal Pradesh). Thus finding of *G. pallampurica* sp. nov. makes an important addition to the odonate fauna of the region.

SUMMARY

Gynacantha palolampurica sp. nov. is described from northern Himachal Pradesh together with illustration and comparative notes.

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