

A RELICT LONGHORN BEETLE FROM THE AZORES
(COLEOPTERA, CERAMBYCIDAE)

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ABSTRACT

Crotchiella brachyptera, gen. n., sp. n., apparently a relict species, is described, illustrated and assigned to the *Achrysonini*.

The cerambycid fauna of the Azores Islands, nearly half-way from Portugal to Newfoundland, is not very rich. Only nine species were hitherto recorded. Most were probably introduced, as a rule from the southwestern part of the Palearctic but two of them from the Neotropical Region. The sole endemic is thought to be akin to a European species and so would be a neo-endemic. Still it might be a representative of the ancient fauna of the vast forests said to have covered extensive portions of the islands at the time of the arrival, about 550 years ago, of the first known colonizers. The original forests are now thoroughly cleared away and transformed into farm land, urban areas, or even new forests although throughout consisting of introduced tree species.

It was therefore a great surprise to find another certainly indigenous longhorn beetle which seems to lack close relatives and consequently would be qualified as a paleo-endemic.

Crotchiella, gen. n.

Type species: *Crotchiella brachyptera*, sp. n.

Named after G.R. Crotch in memory of his contribution to the knowledge of the coleopterous fauna of the Azores.

Body (figs. 1-2) subparallel, depressed. Mandibles without external tooth, apical third not angular. Maxillary palpus (fig. 8) twice as long as labial palpus (fig. 5). Interocular space half as wide as head. Dorsal lobe of eye with 5-7 series of facets. Antenna 11-segmented, much longer than body in both sexes; segments without carinae, sulci, or spines but on inner side with a not very dense fringe of suberect hairs; segment I robust, 3 times as long as broad; segments III and V longest and of about equal length. Prothorax as long as broad and as much constricted in front as behind with, an obtuse tubercle on each side, disc uneven with complicated pattern of pubescence. Elytra without distinct humeral callus or costae; apices simply rounded. Procoxae globose; cavities not angular; process very narrow between coxae but apically dilated with excised apex. Mesocoxae closed; mesosternal process one third as broad as one coxa. Profemora fusiform, mesofemora and metafemora clavate. Tibiae without carinae. Metatarsal segment I somewhat longer than II and III combined. Median lobe of male genitalia about as long as struts (fig. 3). Terminal part of internal sac with a well-defined sclerite, preapical pair of sclerites located inside median lobe. Parameres short.

The above characters will make it possible to classify this genus among the *Achrysonini*, a *Cerambycinae* tribe well diversified in the Neotropical Region but with scattered representatives in North America and in the Old World's tropics and subtropics.

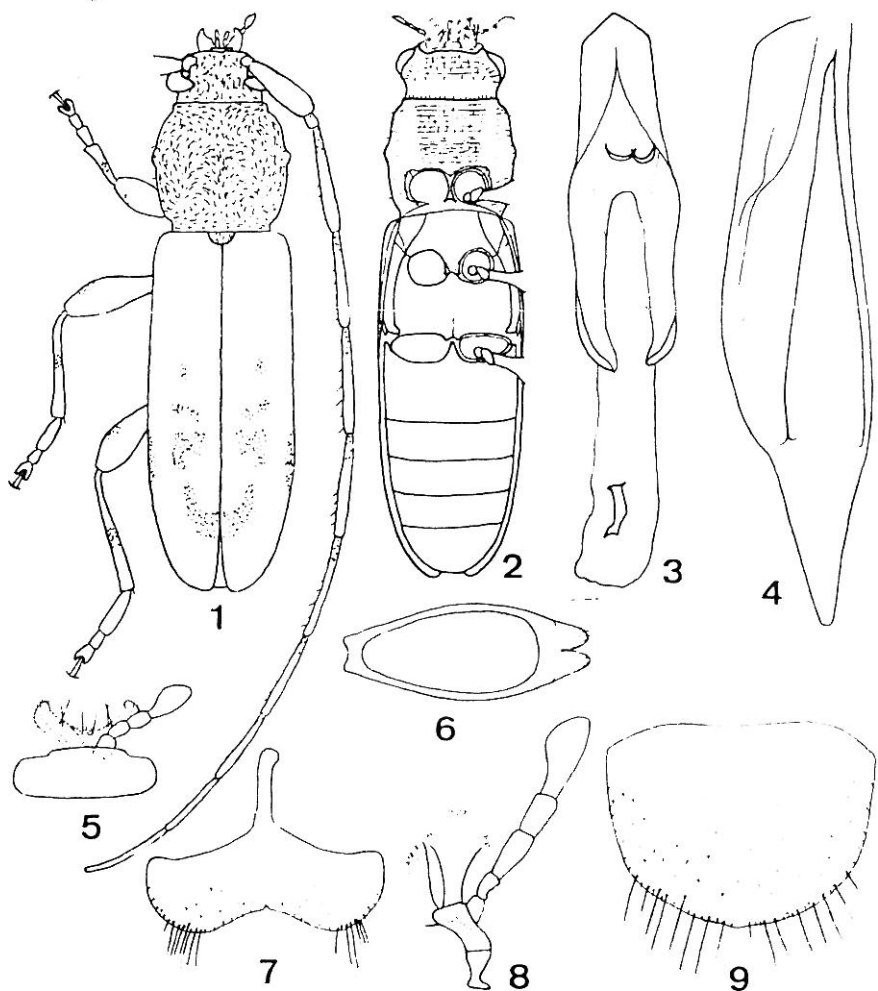
To be judged from descriptions (Napp & Martins, 1982) *Crotchiella* differs from the American genera by the short penial struts. By the presence of lateral prothoracal tubercles and by its reduced membranous wings it is distinguished from both, American forms and the Mediterranean *Icosium*.

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Crotchiella brachyptera, sp. n.
(Figs. 1-16)

Holotype, ♂, Azores Is., Santa Maria, Pico Alto, 11.7. 1982, G. Israelson, in author's collection. Paratypes: 1 ♀, same data; 30 specimens, same data but São Lourenço 9.7.1982; 1 specimen, ditto but in the "Museu de Zoologia, São Paulo".

Adults. Body (fig. 1, 2) 4.7-8.7 mm. Head, prothorax, and scutellum brown to black, mat, elytra and appendages yellow with brown markings, more shining, sterna and abdomen brown. Elytral markings variable in numbers, size, shape, and distribution (no two specimens being quite alike); usually each elytron with a few spots in posterior portion, always lateral sides from base to level of hindmost discal spot dark brown (in dorsal view only visible posteriorly), sometimes spots more numerous and also frequent in anterior half. Femora with a dorsal subapical spot, tibiae and basal portions of antennal segments ringed with brown.



Crotchiella brachyptera, gen. n., sp. n., imago. 1, upper-side (ground pubescence omitted except on head and prothorax). 2, under-side (ditto). 3, penis. 4, membranous wing. 5, labium. 6, tegmen. 7, sternite VIII. 8, maxilla. 9, tergite VIII.

Frons longitudinally arched, finally vertical: clypeo-frontal suture present. Upper side of head with very fine reticulation and coarse network of low, narrow shining ridges, laterad more or less dissolved into granules; pubescence mainly golden, short, depressed; medial hairs pointing backward anteriorly, forward posteriorly; remaining hairs forming whirls according to a definite pattern. Antennae in ♂ with segment VII (in ♀ VIII) passing elytral apex; segment XI in ♂ about one fifth (in ♀ at most very little) longer than preceding; pubescence short, slightly raised, with fringe of long hairs on segments II-IX. Labium and maxilla as in figs. 5 and 8 respectively.

Pronotum with vague longitudinal depression on each side of disc and with a small but distinct lateral tubercle. Surface sculpture and pubescence of same type as on head. Scutellum with rugose punctation and dense decumbent pubescence.

Elytra with disc feebly slanting laterad and lateral sides abruptly vertical. Punctation rather coarse and dense, interstices very finely reticulate; pubescence of moderate length, decumbent, directed apicad. Membranous wings (fig. 4) narrow, shorter than elytra, unfolded.

Legs slender, of moderate length, metafemora not reaching elytral apex. Pubescence mostly subdepressed. Tibiae straight.

Gula and prosternum (fig. 2) with strong transverse wrinkles and sparse, inconspicuous pubescence of more or less erect, long hairs; lateral sides of head and prothorax with structure and vestiture like those of upper side, on prosternum limited mediad by a glabrous, shining, longitudinal area. Ventral side behind prosternum with short, decumbent pubescence. Mesosternum, metepisterna, and coxae with rugose punctation, mat, metasternum and abdominal sternites strongly punctate with finely reticulate interstices, more shining. Abdominal sternite VII in ♂ without transverse depression, strongly punctate and microreticulate, and with hind margin very slightly excised, in ♀ with obscurely limited transverse depression, very fine punctation and microsculpture, and with hind margin subtruncate but not excised. ♂ tergite and sternite VIII as in figs. 9 and 7 respectively.

Aedeagus (fig. 3) with a short point; internal sac posteriorly (in repose) with 2 crescent-shaped sclerites and anteriorly with a single but stronger and more irregularly sickle-shaped sclerite. Tegmen as in fig. 6.

Pupa. Material: 2 pupae from São Lourenço.

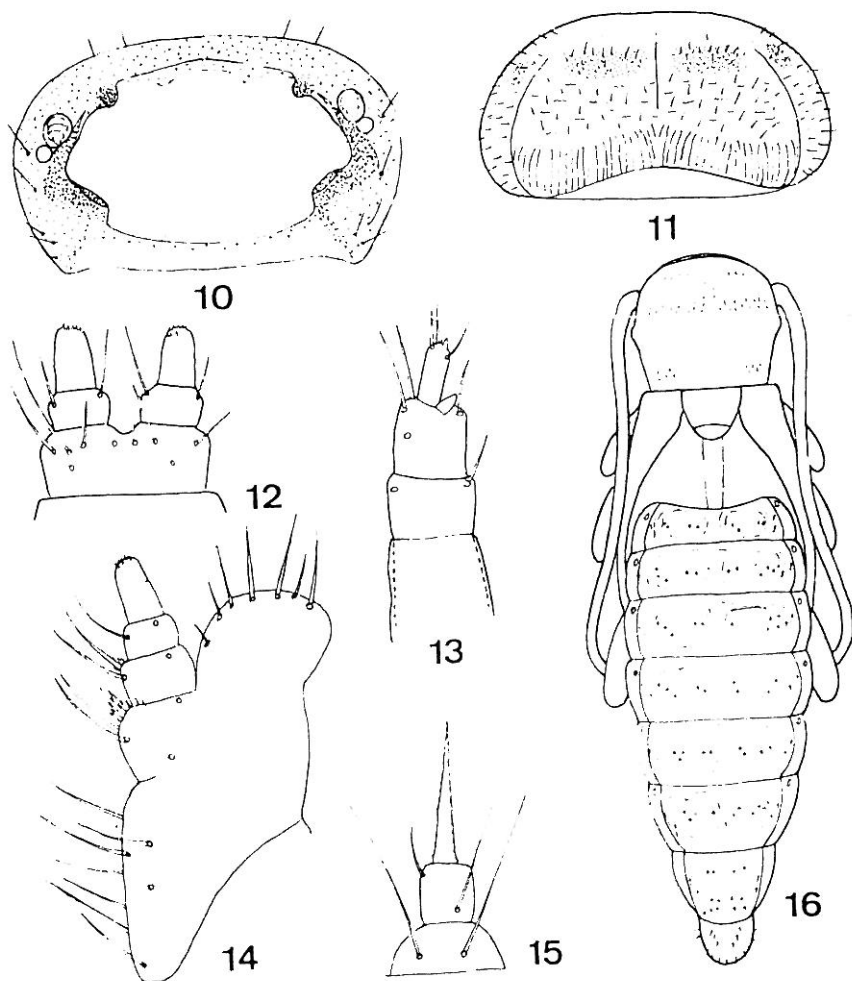
Body (fig. 16) 5.3-8.1 mm. Head triangular, smooth, glabrous; vertex narrowly visible from above. Antennae extending as far as fourth or fifth abdominal segment, strongly recurved, not crossed, finally reaching eye. Eyes moderately convex. Pronotum with front margin convex, broader than hind margin, slightly behind middle with a lateral tubercle on each side; before level of tubercles with two transverse group of mainly anteriorly curved setae; groups at middle connected by a few longitudinally arranged setae; inside hind corner on each side with another small group of setae. Mesonotum and metanotum smooth and glabrous, the latter with a scutellar groove. Elytra extending to fourth abdominal segment, on ventral side concealing alae and apical third of metatibiae. Abdominal segments I-VI with a shallow but rather distinct medial depression, and on each side with an oval area, limited by fine and more or less distinct concentric lines and armed with four to six curved, minute spines, each with a very fine basal seta. Tergite VII with similar spines, four in front half and about eight in hind half. Tergite VIII without spines but with several setae mostly pointing backward. Tergites I-VII on each side with two somewhat longer lateral setae likewise pointing backward. Functional spiracles with oval peritreme present on the 6 first tergites. Sternites glabrous.

No pupa of a species of the tribe Achrysonini seems to have been described before. The *Gracilia* pupa (Graciliini) as described by Duffy (1953: 194) shows some resemblance to that of *Crotchiella*.

Larva. Material: 2 mature larvae from São Lourenço.

Length up to 10.4, width of prothorax 2.4 mm. Body subcylindrical, slightly

tapering posteriorly. White, mandibles pitchy black, mouthframe pitchy-brown, remaining mouth-parts and a small area on each side of lateral pronotal furrow in front half pale yellow. Head, mouthparts excepted, 1.4 times as wide as long, widest behind middle; genae smooth, sparsely pubescent. Mouth-frame (fig. 10) completely sclerotized beneath antennae. Antenna (fig. 13) with an elongate basal membrane, segment III 3 times as long as broad and slightly shorter than II; supplementary segment about one-third of segment III. Mandibles with an elongate impression on outer side. Labrum about semicircular, with numerous short setae. One ocellus present on each side, contiguous with antennal base; lens round, prominent; pigmented spot indistinct. Hypostoma smooth with distinct sutures, margin not tuberculate. Gula narrow with slightly raised sutures. Maxilla (fig. 14) with process of palpifer nearly as long as segment I. Labial palpi as in fig. 12. Prothorax (fig. 11) with lateral sides finely pubescent. Anterior portion glabrous and finely alutaceous; yellow areas finely pubescent; posterior half indistinctly transversely rugose in front, with sparse



Crotchiella brachyptera, gen. n., sp. n., preimaginal stages. Mature larva: 10, mouth-frame. 11, pronotum. 12, labium. 13, antenna. 14, maxilla. 15, leg. pupa: 16, upper-side.

pubescence and longitudinal striation behind. Postnotal fold present. Mesonotum and metanotum alutaceous. Prosternum with a fine medial carina. Abdomen with alutaceous ampullae. Epipleura forming a protuberant ridge on segments VII-IX. Leg (fig. 15), unguiculus excluded, as long as labial palpus. Pleural discs of abdominal segments alutaceous. Spiracles oval, with peritreme and containing numerous chambers.

The only Achrysonini larva to have been previously described seems to be that of *Achryson surinamum* (Linnaeus), which has in fact many similarities to the present one but the *Crotchiella* larva is clearly distinguished by some details, such as the absence of granulate surfaces, hypostomal rugosities, and tubercles on abdominal tergite IX.

The larvae live subcortically for the greater part of their life but finally penetrate the wood for pupation which takes place in a simple pupal chamber. The more or less meandering subcortical galleries are of varying width and filled with a fine, densely compressed powder. The exit holes are ovale or slightly ovate.

Dead branches of *Laurus azorica* and *Vitis vinifera* containing various preimaginal stages of the cerambycid were brought home for rearing and during the following months produced many adults. No adults were noticed in the field.

The *Vitis* locality is at a low altitude and extensively surrounded by farmland definitely indicating that the insect was introduced. The presence in *Laurus* near the top of the island in a small remain of a comparatively natural vegetation, combined with inability of flight makes it more probable however that we are dealing with a truly indigenous species which managed to adapt itself to life in cultivated land.

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