

A NEW SUBSPECIES OF *MONOCHAMUS NOTATUS* (Coleoptera: Cerambycidae) ¹

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Monochamus notatus (Drury) occurs in eastern Canada and northeastern United States, its range extending as far west as Lake Winnipeg and Minnesota. It has also been reported from British Columbia (R. Hopping 1922:258; Dillon and Dillon 1941:75-76). However, this western form differs consistently from the eastern one as to the elytral sculpture and pubescence, and appears to warrant subspecific status.

Monochamus notatus morgani

Hopping n. subsp.

Male: Length 31 mm.; breadth across humeri 10.5 mm.; colour brownish-grey on elytra, more cinereous on the head and prothorax, predominantly grey with black flecks beneath and on the legs; first two segments of antennae blackish-cinereous, remainder dull black, becoming brownish distally.

Head: Front with widely scattered coarse punctures, with areas of fine punctures interspersed which give rise to condensed cinereous patches of appressed short vestiture; coronal suture deeply impressed between antennal tubercles, fine and feebly impressed but entire on the occipital areas, this last fairly densely but not solidly covered with short appressed cinereous pubescence arising from patches of fine punctures; head beneath and genae moderately densely cinereous pubescent, the genae transversely carinulate laterally; antennae about two and one-half times the body length, the third segment a little more than twice the length of first and second combined and about one and one-fourth times the length of the fourth which is about equal to the fifth. *Prothorax* about as broad as long, with marginal bead and broad flat collar apically, transversely carinulate toward the sides; basal collar narrower, also carinulate laterally; disc of pronotum with median elevation devoid of condensed vestiture, but condensed cin-

ereous vestiture nearly covering the lateral tubercles, two smaller patches anterior and two posterior on the disc. This condensed pubescence arises from groups of rather fine punctures, and in addition there are widely scattered coarse punctures; lateral tubercles large and blunt extending to nearly the breadth of humeri, strongly carinulate on the sides of pronotum beneath the tubercles. *Elytra* with side margins notably tapering from base to apex; humeri coarsely tuberculate, rather abruptly rounded; elytral sculpture rough and irregular with large and fairly dense punctures and with condensed cinereous patches interspersed with patches of black velvety pubescence of a different character, these last more scale-like and erect; apices evenly rounded to suture, where there is a very faint suggestion of prolongation. *Under-surface* including legs, mostly covered with appressed cinereous pubescence, but flecked with black where pubescence is absent; front of *prosternum* strongly transversely carinulate, *metasternum* more finely so, somewhat obscured by the grey vestiture; last ventral abdominal segment nearly straight across the hind margin at middle and with a faint suggestion of emargination.

Female: Length 26 mm., breadth across humeri 8 mm. Differs from male in having antennae more cinereous throughout, only slightly longer than the body, faintly annulated; front of head proportionately broader; margins of elytra nearly parallel; front legs not longer than middle or hind pair; last ventral abdominal segment strongly emarginate with a tuft of long black bristles on each side of the emargination.

Holotype male and *Allotype* female, No. 5538 in the Canadian National Collection, Ottawa. Type locality in both cases Trinity Valley, B.C. July 31, 1942 (male) and Aug. 15, 1942 (female), C. V. G. Morgan. *Paratypes* 10: two males and two females in the Canadian National Col-

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lection, Ottawa; three males and three females in the Hopping Collection, Vernon, B. C.

Fifty-four specimens have been examined all from the white pine areas of the interior of British Columbia. Cyanide-killed specimens do not differ much in colour from living examples, but those preserved in alcohol lose much of the grey effect, and the general colour becomes brown.

This subspecies differs from the eastern *notatus* by having notably coarser sculpturing on the elytra and more and generally larger black patches of velvety pubescence dispersed over the elytra. Actually these black tufts alternate with cinereous patches in rows between the

costae. It is named for Mr. C. V. G. Morgan who has made a study (unpublished) of the biology and parasites of *M. notatus morgani*. His data suggest that it breeds only in western white pine (*Pinus monticola* Dougl.) *M. notatus notatus* breeds in *Pinus strobus* and has also been reported from *Pinus banksiana*, *P. resinosa*, *P. ponderosa*, and *Picea glauca* (R. Hopping, 1922). Discussing it under the synonymical name *M. confusor* Kirby, Craighead (1923:107) states "As far as known, it attacks only *Pinus strobus*. Packard . . . and Hopkins record this species attacking living balsam fir (*Abies balsamea*) at Brunswick, Maine, probably confusing it with *marmorator*."

LITERATURE CITED

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- Dillon, Lawrence S., and Elizabeth S. Dillon.** 1941. The tribe **Monochamini** in the western hemisphere (Coleoptera: Cerambycidae). Reading Public Museum and Art Gallery, Reading, Pa., Scientific Publications No. 1 [4+] 1-135, 5 pls.
- Hopping, Ralph.** 1922. A review of the genus **Monochamus** Serv. (Cerambycidae: Coleoptera). Canad. Ent. 53 (11) :252-258, incl. 2 pls. (This number of the Canadian Entomologist, though the "November, 1921" issue, was in fact mailed on Thursday, February 23rd, 1922.)

A NOTE ON THE TANGLE-WINGED FLIES OF BRITISH COLUMBIA (Diptera: Nemestrinidae).—In 1930 I reported to this Society, the occurrence of the nemestrinid fly *Parasymmictus clausus* O.S. which I found laying eggs in telephone poles, fence posts and dried poplar trees on the cattle ranges at Riske Creek, Chilcotin. I have taken it frequently but not every year since, on the ranges at Lac du Bois, Kamloops.

The family Nemestrinidae consists of only some 150 species occurring chiefly in countries of hot dry climates with little rainfall; only 8 species have been found in Europe and 12 in North America, most being neotropical where they are well represented in Chile. Dr. Jos. Bequaert of the Harvard School of Tropical Medicine, the North American authority on these flies, informed me that *P. clausus* was a very rare fly and that its occurrence in the Chilcotin was the furthest north for any representative of the family, in the world.

Until 1943 this species was the only one of the family I had found in the Province but in that year Mr. E. R. Buckell and I found two males of a very similar species *Neorhynchocephalus sackeni* Will. on the dry cattle ranges near Kamloops and this year, 1945, it has been not uncommon.

As far as known, the larvae of the Nemestrinidae are all parasitic upon other insects. I have reared both our local species from grasshoppers, *P. clausus* chiefly from *Camnula pellucida* Scud. but very occasionally from other species of hoppers, and *N. sackeni* from *Melanoplus mexicanus mexicanus* Saus.

Larvae of both flies are so-called "tubed" maggots,

breathing from the 2nd instar onwards by means of a tracheal sheath or funnel attached to the thoracic trachea of their hosts; the vortex of the funnel surrounds the posterior third of the larvae which move freely in the body cavities of their victims, as if tethered by these tubes.—George J. Spencer, Kamloops, B.C.

HOLOPLEURA MARGINATA IN BRITISH COLUMBIA (Coleoptera: Cerambycidae).—A female of this lovely crimson and black longhorn was taken at Arrowhead on May 30, by Charlie Slade. He obtained it by beating the foliage of a Douglas fir tree. When first seen by me the beetle was damaged, lacking head and prothorax, but was still fresh and relaxed. Examples of this species vary from 7 to 12 mm. in length, and the pronotum and elytra from almost entirely crimson to heavily marked with black. The beetles are rather flat, and somewhat resemble the Lycidae.—Hugh B. Leech.

AGABUS CONFERTUS EATING CHIRONOMID LARVAE (Coleoptera, Dytiscidae, Diptera).—Dissections of adults of *Agabus confertus* LeConte collected at Los Altos, Calif., in June, 1937 (E. S. Ross), showed that they had eaten large numbers of chironomid larvae, the so-called "blood worms." In each case the great amount of fine silt in the beetle's proventriculus indicated that both the larvae and the thin protective tubes in which they live had been eaten. The beetles must be able to swallow surprisingly large fragments, for the larval head capsules were found intact.—Hugh B. Leech.