

3. UPPER AUSTRAL—Humid lowlands and prairies east of the 100th meridian in North America, and arid plains and mesas west of the same meridian terminating in the plateau of south-central Mexico.

4. MIDDLE AUSTRAL—Same classification as preceding and just south of it or below.

5. LOWER AUSTRAL—Classified same and south of preceding or below it in altitude.

6. SEMITROPICAL—Practically all humid lowlands in the east and arid lowlands in the west, but rising on the humid eastern mountain slopes and arid western mountain slopes within the tropics of North America. Includes all of the Florida mainland and what has been known as the Gulf strip of the lower austral. Preëminently a citrus-fruit region, severe frosts being rare but not unknown.

7. TROPICAL—Humid to arid lowlands and hills where frost is absolutely unknown. Distinctively a cocoanut and royal palm region.

The above definitions are given because they involve some modification of the usually accepted classification.

The main mountain regions of North America are classified in 4 groups: I—Appalachian (the whole eastern system); II—Rocky Mts. (West Texas to Athabasca and Alaska); III—Sierra Nevada (South California to British Columbia including Coast ranges); IV—Sierra Madre (Chihuahua to Central America).

A REMARKABLE NEW GENUS OF CEPHIDÆ.

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The new genus described below is very remarkable because it possesses family characters of two families—Cephidæ and Xiphydriidæ.

The following important group characters of this genus are listed under the family with which they would ally it.

CEPHIDÆ.	XIPHYDRIIDÆ.
Adult.	Adult.
Thorax	Palpi
Basal part of abdomen	Antennæ
	Long malar space and ven- tral elongation of cheek
	Wings
	Lengthened 8th tergite
	Ovipositor
	Larva (?)

In all but one of the more recent classifications of the Chalcidæ this genus falls in the family Cephidæ. In the classification proposed by MacGillivray¹ which is based on wing venation, it falls in the family of Xiphydriidæ.

As the characters in which this genus is like the Cephidæ are less subject to modification by use they indicate that it should be placed in the Cephidæ and that the Cephidæ are the progenitors of the Xiphydriidæ.

Syntexis, new genus.

In Konow's classification in the Genera Insectorum, this genus falls in the Cephini and runs satisfactorily to the genus *Ateuchopus* Konow from which it may be separated by the filiform antennæ and peculiar venation.

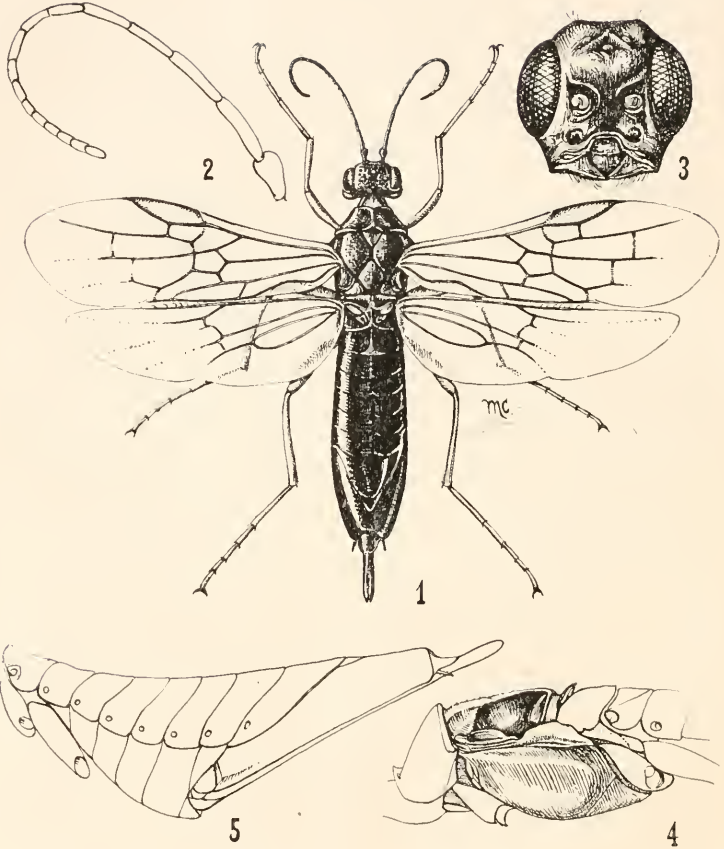
Head seen from above subquadrate, the posterior orbits less than half the cephal-caudad diameter of the eye; occiput immargined; malar space long, slightly greater than the width of mandible at base; cheeks produced ventrally; maxillary palpi long, 6-jointed; labial palpi 3-jointed, short, the apical joint as long as first and second, antennæ 16-jointed, second and third joints subequal, the apical joints filiform; pronotum transverse, posterior margin straight with a narrow median emargination; mesosternum with two accessory sutures which separates off a diamond-shaped plate, posteriorly; mesopostnotum large; metanotum separated from the metapostnotum which is fused with the anterior margin of the first tergite; metepisternum and metepimeron elongate, about of equal size, the metepimeron indistinctly fused with the side of the first tergite; posterior coxæ contiguous; tibiæ without supra-apical spurs; claws simple; tergites not margined laterally; the ninth tergite long as in *Xiphydria*, but truncate before the apex and produced beyond the truncation; ovipositor very like *Xiphydria*; subcosta distinctly removed from the costa; radial cell incomplete; stigma hyaline medially; basal vein joining first cubital cell at about the middle; second recurrent received in the second cubital cell, the first recurrent interstitial; transverse median of the fore wings received slightly basad of the middle of first discoidal cell; lanceolate cell with an oblique cross vein and contracted basally; hind wings typical of the Xiphydriidæ except the two discal cells are not defined and the apical veins are obsolete.

Type: The following new species.

Syntexis libocedrii, new species.

Female. Length to the apex of the abdomen 8 mm.; length of the ovipositor beyond the tip of the abdomen 1.5 mm. Clypeus truncate; supra-clypeal foveæ deep, punctiform; head with large irregular punctures which are more distinct and better defined on the frons; median fovea represented

¹ Proc. U. S. Nat. Mus., vol. 29, 1906, p. 569-654.



EXPLANATION OF PLATE.

Syntexis libocedrii Rohwer. 1, Adult female; 2, antenna of female; 3, front view of head; 4, lateral view of thorax; 5, lateral view of abdomen. (Drawings by Miss Mary Carmody.)

by a very shallow impression; ocellar basin triangular, open below; facial quadrangle wider than high; pronotum subopaque with sparse tubercles; mesonotum similarly sculptured; mesepisternum and sternum shining, under high magnification, very finely reticulate; tibiae and tarsi with weak short spines; abdomen shining; sheath nearly parallel-sided, obtusely rounded apically. Black; mandibles and palpi piceous; inner orbits below antennæ, posterior orbits behind the eye, posterior margin of the pronotum laterally and tergites 2 to 8 on lateral posterior margin, *greenish white*; legs beyond the coxæ rufo-testaceous; wings hyaline, slightly milky; venation pale brown anteriorly, pallid posteriorly.

Rose Camp, California. Described from two females recorded under Bureau of Entomology, No. Hopk. U. S. 4996a which refers to a note stating that these specimens were reared from larvæ and pupæ collected in the cells near the outer surface of the wood of a large incense cedar (*Libocedrus decurrens* Torr.). Material collected August 8, 1913, and reared June 22, 1914, by H. E. Burke.

Type: Cat. No. 19162, U. S. N. M.

Two poorly preserved larvæ are available for study but they are not in good enough condition to satisfactorily describe. However, as they appear to lack the cerci which occur on the apical sternite below the anal orifice, and have the antennæ more like the Xiphydriidæ it is probable that they are more like the larvæ of the Xiphydriidæ than the Cephidæ.

COMMENSALISM IN DESMOMETOPA.

(*Diptera; Agromyzidæ.*)

By FREDERICK KNAB, *Bureau of Entomology.*

The small flies of the genus *Desmometopa* have been repeatedly observed under circumstances which indicate a remarkable specialization in habits. There are now on record a series of observations, made independently in widely separated parts of the globe, which all show that these flies feed upon the juices of freshly killed insects; however, unable to themselves kill their prey, they depend upon various rapacious arthropods, with whom they appear to live in more or less close association.

The Hungarian naturalist Ludwig Biró is responsible for the first and at the same time most remarkable observation in this connection. He observed a species, *Desmometopa minutissima*,¹

¹ Described as an *Agromyza* by Van der Wulp and so recorded by Banks (*Entom. News*, xxii, 196; 1911). Mik, in the article quoted in the following, has referred the species to its proper genus.