

SPECIES, DISTRIBUTION, AND HOST RECORDS OF THE
BRACONID GENERA *MICROCTONUS* AND *PERILITUS*

(HYMENOPTERA: BRACONIDAE)

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During the course of an investigation of the biology of *Microctonus vittatae* Mues., the author compiled a list from available literature of the species of the braconid genera *Microctonus* Wesmael and *Perilitus* Nees together with their known distribution and host records. Earlier but less complete lists of similar nature were presented by Speyer (1925), Jackson (1928), and Muesebeck (1936). The additions included below were scattered widely in the world literature. No pretense is made that this listing is complete or without error. This results in part from the fact that specimens were not examined and that confusion has existed in the classification of the braconid subfamily Euphorinae, to which these genera belong.

SYSTEMATIC POSITION OF THE GENERA *Microctonus* AND *Perilitus*

The genus *Microctonus* was erected by Wesmael in 1835 to include those species of *Perilitus* having two cubital cells in the fore wing. The genus was further restricted by Foerster in 1862 to include only those species in which the first cubital areolet is confluent with the first discoidal. Until 1936, most workers in the Braconidae overlooked or disregarded Foerster's type fixation in the case of *Microctonus* with the result that the true members of this genus have been called *Perilitus*. At the same time the true *Perilitus* were placed in the genus *Dinocampus* Foerster. Muesebeck (1936) revised the genera of the Euphorinae, suppressing *Dinocampus* and dismembering the group originally given the name *Perilitus* to the extent that this restricted genus has become more or less obscured.

According to Muesebeck, the division of the two genera on the basis of the separation (*Perilitus*), or confluence (*Microctonus*), of the first cubital and first discoidal cells, "is obviously an artificial one; but since the species arrange themselves so conveniently into two groups by this character, it has been considered advisable to consider both names as valid." Because these genera constitute a natural group, they have been treated together in this paper.

TABLE 1

Recorded parasitism of adult beetles by the genera Microctonus and Perilitus.

Parasite	Host	Reference	Distribution
<i>Microctonus</i>			
<i>M. aethiops</i> (Nees)	CURCULIONIDAE		
	<i>Sitona hispidula</i> Fab.	Speyer, 1925	Europe, introduced N.
	<i>S. cylindricollis</i> Fahr.	Munro, 1948	Dak, U.S.A.
	CHRYSOMELIDAE		
	<i>Phyllotreta vittula</i>	Kaufman, 1923	
	Redtb.		
	<i>P. nemorum</i> L.	Newton, 1931	
	(Larvae of latter)		

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TABLE 1—(Continued)

Parasite	Host	Reference	Distribution	
<i>M. basalis</i> (Curtis) (<i>bicolor</i> Wesm.)	<i>P. atra</i> Fab.	Kaufmann, 1923	Europe	
	<i>P. undulata</i> Kutsch. <i>P. vittula</i> Redtb. <i>Psylliodes attenuata</i> Koch.			
	<i>Longitarsus longipennis</i> Kuts.	Dmitriev, 1935	Central Russia	
	<i>L. pellucidus</i> Foudr.	Zorina, 1939	Crimea	
<i>M. brevicollis</i> (Haliday)	<i>Halicta ampelophaga</i> Guér. (Larvae and Adults)	Künckel d'Herculaix & Langlois, 1891	Algeria	
<i>M. carabivorus</i> Muesebeck	CARABIDAE <i>Galerita</i> sp.	Muesebeck, 1936	Va. and Ia., U.S.A.	
<i>M. cerealium</i> (Haliday)	CURCULIONIDAE <i>Sitona hispidula</i> Fab. <i>S. sulcifrons</i> Thrugb. <i>S. lepidus</i> Gyllenhal	Jackson, 1924	Europe, England	
<i>M. eleodis</i> (Viereck)	TENEBRIONIDAE <i>Eleodes opaca</i> (Say) <i>E. suturalis</i> (Say) <i>E. obsoleta</i> (Say) <i>E. extricata</i> (Say) <i>E. tricosata</i> (Say) <i>E. hispilabris</i> (Say) <i>E. vandykei</i> Blaisdell <i>Embaphion muricatum</i> Say <i>E. planum</i> Horn	McColloch, 1918 Muesebeck, 1936	W. U.S.A., Kan., & N. Mex. NW to Wash.	
	<i>M. epitricis</i> (Viereck)	CHRYSOMELIDAE <i>Epitrix hirtipennis</i> Melsh.	Peterson, 1932	Va. to Ill., U.S.A.
		<i>E. cucumeris</i> (Harr.)	Cameron, 1915	
	<i>M. gastrophysae</i> (Ashmead)	<i>Gastrophysa cyanea</i> Melsheimer	Muesebeck, 1936	D.C. and Va., U.S.A.
		<i>G. viridula</i> (Degear)		
	<i>M. melanopus</i> Ruthe	CURCULIONIDAE <i>Ceutorrhynchus</i> <i>quadridens</i> Panz.	Speyer, 1925	Germany
	<i>M. mellinus</i> (Provancher)	Not known	Muesebeck, 1936	E. seaboard Amer., Quebec to Ga.
	<i>M. morimi</i> Ferrière	CERAMBYCIDAE <i>Morimus asper</i> Sulzer	Grandi, 1931 Goidanich, 1933	Italy
<i>M. nigritus</i> (Provancher)	Not known	Muesebeck, 1936	Quebec & Mich., Amer.	
<i>M. parvicornis</i> Ruthe	Not known	Lyle, 1933, Kloet & Hincks, 1945	Britain	
<i>M. pusillae</i> Muesebeck	CHRYSOMELIDAE <i>Phyllotreta pusilla</i> Horn	Muesebeck, 1936 Chittenden & Marsh, 1920	Gt. Plains Sts., W. U.S.A. and Canada	
	<i>P. albionica</i> Lec. (?)	Glendenning, 1927		

TABLE 1—(Continued)

Parasite	Host	Reference	Distribution
<i>M. spurius</i> Ruthe	Not known	Lyle, 1933, Kloet & Hincks, 1945	Britain
<i>M. vittatae</i> Muesebeck	<i>Phyllostreta striolata</i> (Fab.)	Chittenden, 1920	E. coast Amer. west to Gt. Plains Sts.—Ont. to La., Japan (?)
	<i>P. bipustulata</i> (Fab.)	Peterson, 1932	
	<i>P. zimmermanni</i> (Crotch)	Smith, 1949	
<i>Microctonus</i> sp.	CURCULIONIDAE <i>Cylindrocopiturs furnissi</i> Buchanan	Furniss, 1942	Pacific, N.W., Amer.
<i>Perilitus</i> <i>P. areolatus</i> Thomson	CHRYSOMELIDAE <i>Phyllostreta atra</i> Fab. <i>P. cruciferae</i> Goeze <i>P. diademata</i> Foudr. <i>P. consobrina</i> (Curt.) <i>P. nigripes</i> (Fab.) <i>P. undulata</i> Kutsch.	Newton, 1931	England
<i>P. coccinellae</i> Schrank (<i>terminatus</i> Nees) (<i>americanum</i> Riley)	COCCINELLIDAE <i>Adalia frigida</i> Schn. <i>A. bipunctata</i> (L.)	Speyer, 1925 Balduf, 1926 Goidanich, 1933 Ogloblin, 1913 Timberlake, 1917 Liu, 1944	Throughout most of Holarctic, Realm & also Fiji, Hawaii, New Zealand and Australia
	<i>Adonia variegata</i> Goeze <i>Coelophora inaequalis</i> (Fab.) <i>Ceratomegilla fuscilabris</i> Muls. <i>Cycloneda munda</i> Say <i>Hippodamia convergens</i> Guér. <i>H. 5-signata</i> Kirby <i>H. 13-punctata</i> (L.) <i>H. parenthesis</i> Say <i>H. sinuata</i> var. <i>spuria</i> Lec. <i>Halyzia 14-punctata</i> L. <i>Macronaemia hauseri</i> Weise <i>Olla abdominalis</i> Say <i>Semiadalia 11-notata</i> Schneid. <i>Coccinella 5-punctata</i> L. <i>C. 7-punctata</i> L. <i>C. 9-notata</i> Herbst. <i>C. 13-punctata</i> <i>C. californica</i> Mann. <i>C. perplexa</i> var. <i>juliana</i> Muls. <i>C. fuscilabris</i> <i>C. sanguinea</i>		
<i>P. falciger</i> Nees	MELANDRYIDAE <i>Orchesia micans</i> Panz. CHRYSOMELIDAE <i>Timarcha coriaria</i> Laich. <i>T. laevigata</i> Duft.	Speyer, 1925, after Marshall, 1887 & 1891	England
<i>P. labilis</i> Ruthe	CURCULIONIDAE <i>Sitona</i> spp.	Grossheim, 1928	Russia
	<i>S. lineata</i> L.	Dmitriev, 1935	England (?)
	<i>S. crinita</i> Hbst.	Ulashkevich, 1936 Jackson, 1928 (?)	

TABLE 1—(Continued)

Parasite	Host	Reference	Distribution
<i>P. leptosi</i> Viereck	<i>Leptops hopei</i>	Ferrière, 1931, after Farrel, 1919	Australia
<i>P. myloceri</i> Wilkn.	<i>Mylocerus unidecim-pustulatus</i> var. <i>maculosus</i> Desb.	Fletcher, 1930	Pusa & Bihar, India
<i>P. omophli</i> Lesne	ALLECULIDAE <i>Omophlus caeruleus</i>	Lesne, 1892	Algeria
<i>P. pyri</i> (Viereck) (May be same as <i>rutilus</i> Nees)	Not known	Muesebeck, 1936	Conn. & N. J., U.S.A.
<i>P. rutilus</i> Nees	CURCULIONIDAE <i>Sitona lineata</i> L. <i>S. hispidula</i> Fab.	Jackson, 1928	England, (all Europe (?))
<i>P. strenuus</i> Marshall	Not known	Kloet & Hincks, 1945	England
<i>P. stuardoi</i> Porter	COCCINELLIDAE <i>Adalia bipunctata</i> L. <i>A. deficiens</i> Muls. <i>Eriopis connexa</i> Germ. <i>Cryptolaemus mont-rouziersi</i> Muls.	Cortés, 1941	Chile
* <i>plumicornis</i> Ruthe	ANTHICIDAE <i>Notoxus monoceros</i> L.	Görnitz, 1937	Germany
* <i>vaginator</i> Wesm.	Not known	Ferrière, 1931	Br. Museum (?)
* <i>Perilitus</i> sp.	CHRYSOMELIDAE <i>Psylloides chrysocephala</i> L.	Kaufmann, 1923	Germany
* <i>Perilitus</i> sp.	CURCULIONIDAE <i>Anthonomus pomorum</i> L.	Speyer, 1933	Germany
* <i>ruficollis</i> Cameron	Not known	Zoo Record, 1906	S. Africa
* <i>brunneus</i> Niezabito-wski	Not known	Zoo Record, 1912	Poland
* <i>nigriventris</i> Niezabito-wski	Not known	Zoo Record, 1912	Poland
* <i>transsylvanicus</i> Endre	Not known	Zoo Record, 1928	Hungary

NOTE: Host names listed are essentially those given by the authors cited. In a few cases where it has been omitted, the authority was added.

*—Names so preceded probably belong to *Microctonus* rather than *Perilitus*.

Szépligeti (1904) lists 24 species not included above, 19 for Europe and 5 for South America, under the genus *Perilitus* and three additional species from Europe under the genus *Dinocampus*. All of the currently designated *Microctonus* (known at that time) are listed as *Perilitus*, but he includes under this genus two species of the true *Perilitus*. His list of *Dinocampus* does not include any of the true *Microctonus* mentioned above. It would thus appear that most of these would now fall within the latter genus. It is not known, however, how many of these

species remain valid under the genera *Microctonus* and *Perilitus*. He gives no record of hosts species.

Insofar as their habits are known, the species of these two genera are beneficial excepting the two species which attack Coccinellidae and the one that parasitizes *Galerita*. Adult beetles of the families Curculionidae and Chrysomelidae are their most frequent hosts. Several species are rated as primary controlling factors of certain flea beetles.

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