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## THE IDENTITY OF *ALPERTIA LUNATIFRONS* LOOMIS, WITH RECORDS OF INTRODUCED POLYDESMIDS FROM NORTHWESTERN NORTH AMERICA, DELETION OF *POLYDESMUS RACOVITZAI* BROLEMANN, AND IDENTIFICATION OF INVALID TAXA (POLYDESMIDA: POLYDESMIDAE)

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### ABSTRACT

The holotype of the 19-segmented "trichopolydesmid" milliped species, *Alpertia lunatifrons* Loomis, found in an ant nest in Washington state, is an unidentifiable juvenile male of the European polydesmid genus, *Polydesmus* Latreille. *Alpertia* Loomis is synonymized accordingly, and *A. lunatifrons* is placed under *P. angustus* Latzel (syns. nov.!), an introduced species occurring with ants of the same genus in Europe. Known localities of introduced polydesmids - *Brachydesmus superus* Latzel, *P. inconstans* Latzel, and *P. angustus* - in the northwestern United States and Canada are summarized, and the questionable record of *P. racovitzai* Brolemann from Seattle is deleted, as the specimens cannot be located. The nominal Nearctic polydesmid genera *Coronodesmus* and *Idahodesmus* and the new Asiatic subfamily Epanerchodinae, proposed in a recent Ph. D. thesis, are unofficial and taxonomically unavailable because the document does not comply with publication requirements of the International Code of Zoological Nomenclature.

The polydesmoid milliped genus *Alpertia* was proposed by Loomis (1972) for an ostensibly new, 19-segmented species, *A. lunatifrons* Loomis, which the author referred to the Trichopolydesmidae. According to the original description, the male holotype and female paratype were found in Washington state in nests of the western mound-thatching ant, *Formica obscuripes* Forel, the former coming from a nest in Spokane and the latter, from one in Walla Walla. Because Loomis did not verbally characterize or illustrate the gonopods, his only illustration being a meaningless sketch of the head and first segment, both names immediately fell into obscurity, and *Alpertia* was inadvertently omitted from the "Classification" (Hoffman 1980), as noted by Shelley (1994) and Golovatch (1994). To the best of my knowledge, neither *Alpertia* nor *A. lunatifrons* has been mentioned again.

As part of my research on the taxonomy of millipeds in the northwestern United States and adjacent Canada, I recently borrowed the holotype of *A. lunatifrons* to ascertain its identity. According to Loomis (1972), the paratype, which could represent a different species and possibly even a different genus, was deposited in the FSCA (see acronyms below), but a thorough search by the curator and a technician in January 1995, and one by the author during a visit to this institution in November, failed to locate it. The holotype is the critical specimen taxonomically, and it is much larger than a true trichopolydesmid, being one of the

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introduced European polydesmids that are common in American and Canadian cities. Furthermore, it is not an adult male but a juvenile with gonopod primordia on segment 7, which explains the absence of gonopodal information in the original description. The specimen would undergo one more molt and add one segment to reach maturity, so I place *Alpertia* in synonymy under *Polydesmus* Latreille (syn. nov.!), the only genus of 20-segmented polydesmids known to be introduced into North America. The specific identity is uncertain because the specimen is a juvenile, but according to Schubart (1934), *P. angustus* Latzel, a widespread introduction into North America, inhabits nests of *Formica* spp. in Europe. Other introduced species of *Polydesmus* are not so associated, and *P. angustus* occurs in Washington, being initially recorded below. Consequently, I place *A. lunatifrons* in synonymy under *P. angustus* (syn. nov.!). Ironically, the other new taxa described by Loomis (1972), *Neottiulus striatus*, n. gen., n. sp., ostensibly representatives of the julidan family Nemasomatidae, also are synonyms of a European milliped that has been widely introduced into American and Canadian cities, in this case the common julid, *Cylindroiulus latestriatus* (Curtis) (Hoffman 1980).

I (Shelley 1990) reported *B. superus* from Vancouver, British Columbia, Canada, and *Polydesmus inconstans* Latzel, from Edmonton, Alberta, and New Westminster, Penticton, and Victoria, British Columbia. Loomis (1972) recorded *P. inconstans* from Walla Walla, Washington, and Loomis & Schmitt (1971) reported it from Missoula, Flathead, and Lake counties, Montana, and Bonner County, Idaho. Causey (1954) reported *P. racovitzae* Brolemann from the University of Washington campus, Seattle, a dubious record because she did not provide corroborating illustrations, and this species, which occurs in the Pyrenees and Banyuls-sur-Mer, France, has not otherwise been encountered in North America. Because of Causey's record, Chamberlin & Hoffman (1958) included *P. racovitzae* in the North American checklist. The citations probably represent misidentifications of a common introduced species, but the specimen(s) cannot be located for reexamination. Presumably, the material was deposited in her personal collection, which was transferred to the FSCA after her death in 1979, but again, thorough searches by the curator, technician, and author failed to locate it. The record of *P. racovitzae* must therefore be disregarded until confirmed with fresh material, and I herewith delete the species from the continental fauna.

Two new Nearctic polydesmid genera, *Coronodesmus* and *Idahodesmus* were proposed by Withrow (1988) in his Ph. D. thesis; along with his new subfamily, Epanerchodinae, they have subsequently been cited by Simonsen (1990) and Golovatch (1991). However, none of the names has been proposed in accordance with the International Code of Zoological Nomenclature. Article 8 (d) (ii) states that, to be accepted as published within the meaning of the Code, works produced after 1985 by methods other than conventional printing, as in Withrow's thesis, must contain a specific statement that new taxa and nomenclatural actions are intended for "permanent, public, scientific record." I have read and reread the facsimile printout of Withrow's thesis that is available from University Microfilms International and find no such statement, so the document does not meet this requirement and is not published within the meaning of the Code. Withrow's new taxa are therefore unavailable, and his nomenclatural actions are unofficial. The former represent manuscript names that should not be cited again until formally validated in a publication outlet that meets the Code's availability requirements; otherwise they constitute *nomina nuda*. In contrast to Withrow's thesis, that of Simonsen (1990) does meet the requirements of the Code, as it was published by conventional printing, is an official publication of the Museum of Zoology, University of Bergen, and presumably can be obtained through this institution. Although Simonsen (1990) and Golovatch (1991) have reported Withrow's new family-group name with an indication, stating that it included, or was solely for, the Asiatic genus *Epanerchodus* Attems, this taxon is still unofficial and unavailable because according to articles 13 (e) and 12 (b) (4) of the Code, names proposed after 1930 solely by indication, in this case the

formation of a family-group name from the stem of a genus-group name, are not thereby made available. To prevent massive confusion as to which taxa are official and unofficial, particularly among future students who may lack access to unpublished works like Withrow's thesis, diplopod authors are strongly encouraged to publish in accordance with the Code and to refrain from citing invalid new taxa proposed in works that do not comply with the Code's availability requirements.

I list below new localities from the northwestern United States and Canada for the indicated exogenous polydesmids. The record of *P. angustus* from British Columbia is the first from western Canada; it is known from Nova Scotia in the east (Shelley 1988). Gonopod illustrations are provided by Blower (1985). Acronyms of sources of preserved specimens are as follows:

- AC - Biology Department, Alma College, Alma, Michigan.  
 AMNH - American Museum of Natural History, New York, New York.  
 FSCA - Florida State Collection of Arthropods, Gainesville.  
 NCSM - North Carolina State Museum of Natural Sciences, Raleigh.  
 NMNH - National Museum of Natural History, Smithsonian Institution, Washington, DC.  
 RBCM - Royal British Columbia Museum, Victoria, British Columbia, Canada.  
 UID - Department of Plant, Soil, and Entomological Sciences, University of Idaho, Moscow.  
 USU - Biology Department, Utah State University, Logan.  
 WSU - James Entomological Museum, Washington State University, Pullman.  
 WU - Biology Department, Willamette University, Salem, Oregon.

*Brachydesmus superus* Latzel

- IDAHO: Franklin Co.; Preston, 2F, 4 March 1987, G. F. Knowlton (USU).  
 OREGON: Benton Co.; Corvallis, M, 19 November 1964, R. F. Koontz (FSCA).  
 WASHINGTON: Whitman Co.; ca. 8 mi (12.8 km) S Pullman, jct. Wawawai & Union Flat Rds., MM, FF, 5 June 1993, R. M. Shelley, R. S. Zack (NCSM); and ca. 8 mi (12.8 km) NW Colton, top of Wawawai Cyn., 2M, 2F, 6 February 1986, R. S. Zack (WSU).

*Polydesmus inconstans* Latzel

- IDAHO: Franklin Co.; Franklin, M, 4F, 26 November 1953, G. F. Knowlton (NMNH). Nez Perce Co., 5 mi (8 km) WNW Culdesac, MM, FF, 14 May 1982, collector unknown (UID). Payette Co.; Payette, 2M, F, 13 May 1938, W. Ivie (AMNH).  
 OREGON: Clatsop Co., Cannon Beach, M, 26 June 1962, A. L. Edgar (AC). Marion Co.; Willamette Mission, M, 27 March 1987, S. R. Wells (WU); and Minto-Brown Park, M, 18 January 1990, S. R. Wells (WU). Multnomah Co.; Portland, NW Skyline Blvd., 2M, F, 28 April 1957, D. Monroe (USU). Union Co.; LaGrande, "O" Ave., 4M, 2F, 1 July 1977, A. K. Johnson (NCSM).  
 WASHINGTON: Clallam Co.; Sequim, M, 16 June 1982, R. A. Agee (WSU). Grays Harbor Co.; Aberdeen, M, 26 March 1981, S. R. Wells (WU).

*Polydesmus angustus* Latzel

- USA: WASHINGTON: Whitman Co., ca. 8 mi (12.8 km) S Pullman, jct. Wawawai & Union Flat Rds., M, 5 June 1993, R. M. Shelley, R. S. Zack (NCSM).  
 CANADA: BRITISH COLUMBIA: Vancouver; Jericho Park, ca. 1.9 mi (3 km) E Univ.

of British Columbia campus, M, 29 October 1994, C. L. Whitney (RBCM).

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