Zootaxa 3785 (3): 301–342
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3785.3.1
http://zoobank.org/urn:lsid:zoobank.org:pub:6D6FCCF0-DA35-4F72-9420-07FDF9158E3F

Revision of the new world species of *Hylurgops* LeConte, 1876 with the description of a new genus in the Hylastini (Coleoptera: Scolytinae) and comments on some Palearctic species

JAVIER E. MERCADO-VÉLEZ[1, 2, 3] & JOSÉ F. NEGRÓN[2]

[1] *Colorado State University, Fort Collins, Colorado*
[2] *USDA/FS/Rocky Mountain Research Station, 240 West Prospect, Fort Collins, CO 80526*
[3] *Corresponding author. E-mail: jmercado01@fs.fed.us*

Table of contents

Abstract

The New World species of the genus *Hylurgops* LeConte are revised and *Hylurgops subcostulatus* Mannerheim is transferred to the new genus *Pachysquamus*. A revised key to the tribe Hylastini which can be used for the world fauna is presented to include *Pachysquamus*. Our studies suggest that the Nearctic species *H. knausi* Swaine is a valid taxon, distinguishable from the Mesoamerican *H. planirostris* Chapuis. The subspecies *H. rugipennis rugipennis* Mannerheim and *H. r. pinifex* Fitch are considered distinct species. A key to *Hylurgops* species of the New World is provided to accommodate the restituted species. Due to their broadly separated procoxae the Palearctic species *H. bonvouloiri* and *H. inouyei* do not agree with the genus *Hylurgops*.

Key words: bark beetles, morphology, Hylastini, *Hylurgops*, *Pachysquamus*, key, aedeagus

Accepted by L. Kirkendall: 30 Jan. 2014; published: 4 Apr. 2014

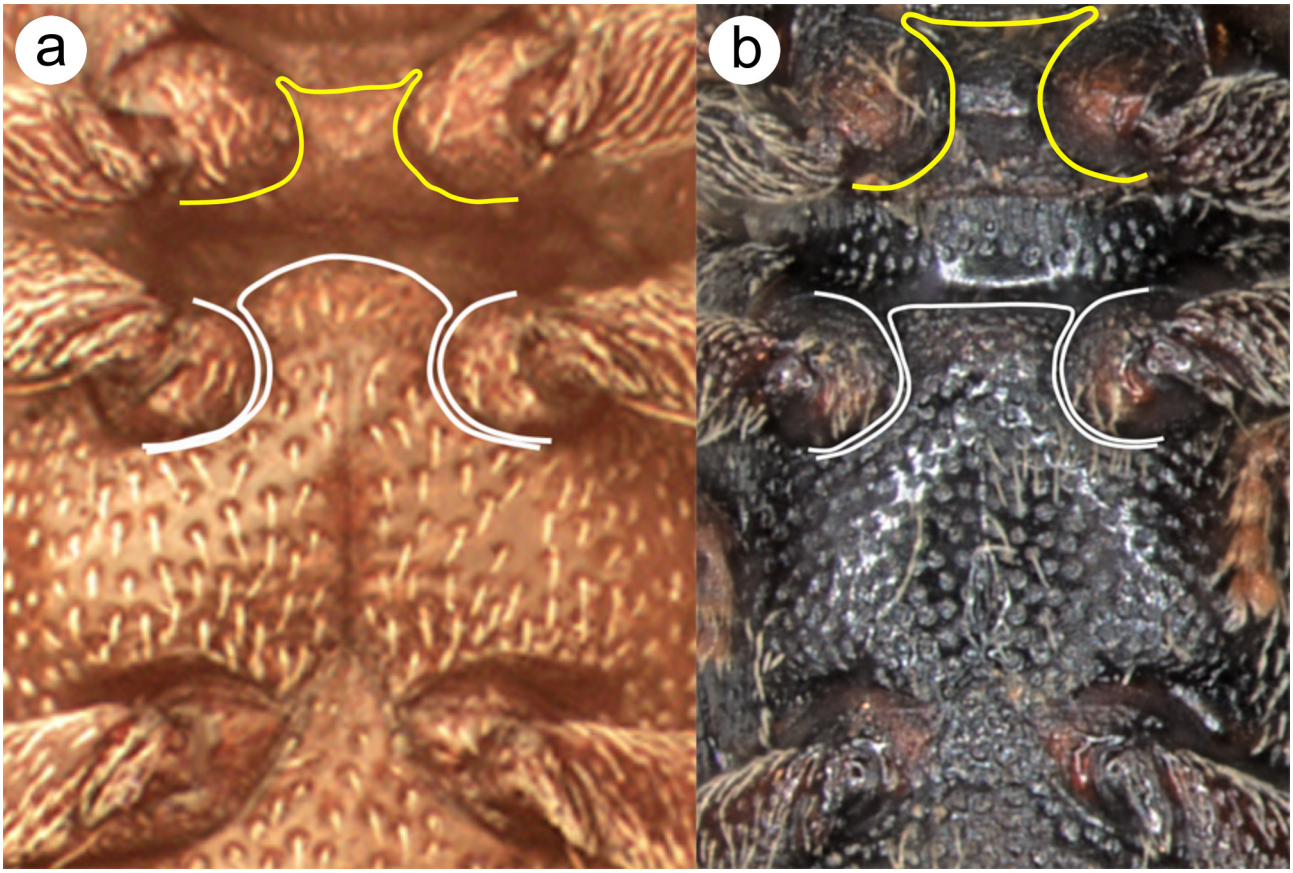

FIGURE 27. Procoxae separation (yellow lines, mesocoxae in white) by proventrite in *Scierus* and a Palearctic *Hylurgops* species: a) *S. annectens* (Photo by Dr. Richard J. Buss), b) *H. bonvouloiri*

Acknowledgements

The following institutions provided instrumental funding for this revision: The USDA/FS Rocky Mountain Research Station, Fort Collins, Colorado; APHIS/PPQ Center for Plant Health Science and Technology, Fort Collins, Colorado, special thanks to Dr. Terrence Walters; the National Science Foundation's Alliance for Graduate Education and the Professoriate.

The following museums and their collection managers provided specimens for this revision: Canadian National Collection of Insects, Arachnids and Nematodes (CNCI): Dr. Pat Bouchard; Colorado State University Insect Collection: Dr. Boris C. Kondratieff; Cornell University Insect Collection: E. Richard Hoebeke; Museum of Natural History, Vienna: Dr. Heiner Schönmann; United States National Museum (USNM): Dr. David Furth and Dr. Natalia J. Vandenberg; and Dr. Donald E. Bright, for the use of his personal collection.

The following reviewers contributed their valuable comments for this manuscript: Dr. Donald E. Bright, Dr. Boris C. Kondratieff, Dr. Thomas H. Atkinson, Dr. Bjarte H. Jordal, and Dr. Lawrence R. Kirkendall (editor).

References

Alonso-Zarazaga, M.A. & Lyal, C.H.C. (2009) A catalogue of family and genus group names in Scolytinae and Platypodinae with nomenclatural remarks (Coleoptera: Curculionidae). *Zootaxa*, 2258, 1–134.

Arnett, R.H., Samuelson, G.A. & Nishida, G.M. (1993) *The Insect and Spider Collections of the World*. Sandhill Crane Press, Gainesville, Florida, 310 pp.

Atkinson, T.H. & Equihua-Martínez, A. (1985a) Lista comentada de los coleópteros Scolytidae y Platypodidae del Valle de México. *Folia Entomológica Mexicana*, 65, 63–108.

Atkinson, T.H. & Equihua-Martínez, A. (1985b) Notes on biology and distribution of Mexican and Central American

Scolytidae (Coleoptera). I. Hylesininae, Scolytinae except Cryphalini and Corthylini. *The Coleopterists Bulletin*, 39 (3), 227–238.
Atkinson, T.H., Rabaglia, R.J., Peck, S.B. & Foltz, J.L. (1991) New records of Scolytidae and Platypodidae (Coleoptera) from the United States and the Bahamas. *The Coleopterists Bulletin*, 45 (2), 152–164.
Barr, B.A. (1969) Sound production in Scolytidae (Coleoptera) with emphasis on the genus *Ips*. *The Canadian Entomologist*, 101, 636–672.
http://dx.doi.org/10.4039/ent101636-6
Benz, G., Bovey, P. & Junod, P. (1986) On the specific attraction of the males of the six-toothed spruce bark beetle, *Pityogenes chalcographus* (L.) to a mixture of synthetic pheromones of the eight-toothed spruce bark beetle, *Ips typographus* (L.) (Coleoptera, Scolytidae). *Experentia*, 42 (3), 325–326.
http://dx.doi.org/10.1007/bf01942523
Blackman, M.W. (1919) Notes on forest insects I: On two bark-beetles attacking the trunks of white pine trees. *Psyche*, 26 (4), 85–96.
http://dx.doi.org/10.1155/1919/30961
Blandford, W.F.H. (1894) The Rhynchophorus Coleoptera of Japan, Part III Scolytidae. *Transactions of the Entomological Society of London*, 53–141.
Blandford, W.F.H. (1896) Scolytidae. *In:* Godman, F.D. & Salvin, O. (Eds.), *Biologia Centrali-Americana. Insecta, Coleoptera*, 4 (6), pp. 81–144.
Blandford, W.F.H. (1897) Scolytidae. *In:* Godman, F.D. & Salvin, O. (Eds.), *Biologia Centrali-Americana. Insecta, Coleoptera*, 4 (6), pp. 145–184.
Blandford, W.F.H. (1898) The identity of *Xyleborus affinis*, with some synonymical notes. *Entomological News and Proceedings of the Entomological Section*, 9 (1), 3–6.
Bright, D.E. (1967) Catalogue of the Swaine types of Scolytidae (Coleoptera) with designations of lectotypes. *The Canadian Entomologist*, 99 (7), 673–681.
Bright, D.E. (1976) *The Insects and Arachnids of Canada, Part 2: The Bark Beetles of Canada and Alaska (Coleoptera: Scolytidae)*. Canada Department of Agriculture, Ottawa, Ontario, 241 pp.
Bright, D.E. & Stark, R.W. (1973) *The Bark and Ambrosia Beetles of California: Coleoptera: Scolytidae and Platypodidae.* University of California Press, Berkeley, California, 169 pp.
Bruck, C.R. (1936) A synoptic revision of the subfamily Hylesininae of western North America North of Mexico. *Bulletin of the southern California Academy of Sciences*, 35 (1), 38–51.
Byers, J.A. (1992) Attraction of bark beetles, *Tomicus piniperda*, *Hylurgops palliatus*, and *Trypodendron domesticum* and other insects to short chain alcohols and monoterpenes. *Journal of Chemical Ecology*, 18, 2385–2402.
http://dx.doi.org/10.1007/bf00984957
Chamberlin, W.J. (1939) *The Bark and Timber Beetles of North America North of Mexico.* Oregon State University, Corvallis, Oregon, 513 pp.
Chapuis, F. (1869) *Synopsis des Scolytides (Prodrome d'un travail monographique).* Société Royale des Sciences de Liège, Liège, Belgium, 61 pp.
Chapuis, F. (1873) Synopsis des Scolytides. *Mémoires de la Société Royale des Sciences de Liège*, 2 (3), 213–269.
Cibrián-Tovar, D., Méndez-Montiel, J.T., Campos-Bolaños, R., Yates, H.O. III & Flores-Lara, J. (1995) *Forest Insects of Mexico*. Universidad Autónoma Chapingo, Chapingo, Estado de Mexico, 453 pp.
Crowson, R.A. (1967, reprint from 1955) *The Natural Classification of the Families of Coleoptera.* E.W. Classey Ltd., Middlesex, England, 214 pp.
Davis, E.E., Albrecht, E.M. & Venette, R.C. (2008) *Hylurgops palliatus*. *In:* Venette, R.C. (Ed.), *Pine Commodity-Based Survey, Cooperative Agricultural Pest Survey.* USDA, Northern Research Station, St. Paul, pp. 43–54.
Eichhoff, W. (1881) *Die Europäischen Borkenkäfer: Für forstleute, Baumzüchter und Entomologen.* Julius Springer Press, Berlin, Germany, 315 pp.
Erichson, W.F. (1836) Systematische auseinandersetzung der familie der borkenkäfer (Botrischidae). *Archiv Für Naturgeschicthe*, 2, 45–65.
Fitch, A. (1858) Fourth report on the noxious, beneficial and other insects of the state of New York. *Transaction of the New York State Agriculture Society*, 17, 687–814.
Fossestøl, K.O. & Sverdrup-Thygeson, A. (2009) Saproxylic beetles in high stumps and residual downed wood on clear-cuts and in forest edges. *Scandinavian Journal of Forest Research*, 24, 403–416.
http://dx.doi.org/10.1080/02827580903143871
Furniss, R.L. & Carolin, V.M. (1977) *Western Forest Insects.* Miscellaneous Publication No. 1339, United States Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station, Washington, D.C., 654 pp.
Gillanders, A.T. (1908) *Forest Entomology.* William Blackwood & Sons, Edinburgh, England, 422 pp.
Graham, S.A. (1922) Effect of Physical Factors in the Ecology of Certain Insects in Logs. *In:* Ruggles, A.G. (Ed.), *Nineteenth Report of the State Entomologist of Minnesota*. Agricultural Experiment Station University Farm, St. Paul, pp. 22–40.
Grocholski, J., Michalski, J. & Nowak, W. (1976) Notes on intraspecific variation and sexual dimorphism of some Palearctic species in the genus *Hylastes* Er. (Col., Scolytidae). *Acta Zoologica Cracoviensia*, 21, 553–584.
Grünwald, M. (1986) Ecological segregation of bark beetles (Coleoptera, Scolytidae) of Spruce. *Journal of Applied Entomology*, 101, 176–187.

Gyllenhal, L. (1813) *Insecta Svecica Descripta. Clasis I, Coleoptera sive, Scolytidae*. F. J. Leverentz, Scaris, 730 pp.
Haack, R.A. (2001) Intercepted Scolytidae (Coleoptera) at U.S. ports of entry: 1985–2000. *Integrated Pest Management Reviews*, 6, 253–282.
Haack, R.A. (2006) Exotic bark- and wood-boring Coleoptera in the United States: recent establishments and interceptions. *Canadian Journal of Forest Research*, 36, 269–288.
Haack, R.A. & Petrice, T.R. (2009) Bark-and wood-borer colonization of logs and lumber after heat treatment to ISPM 15 specifications: the role of residual bark. *Journal of Economic Entomology*, 102 (3), 1075–1084.
Hagedorn, M. (1910) Coleoptera Fam. Ipidae. *In:* Wytsman, P. (Ed.), *Genera Insectorum, Fasc. 111.* Brussels, pp. 1–178 + XIV plts.
Hamilton, J. (1889) Catalogue of the Coleoptera common to North America, northern Asia and Europe, with the distribution and bibliography. *Transactions of the American Entomological Society and Proceedings of the Entomological Section of the Academy of Natural Sciences*, 16 (2), 88–162.
Hamilton, J. (1891) Comments on the fifth report of the U.S. Entomological Division. *Insect Life*, 4 (3–4), 129–132.
Heyden, L. (1890) Europäisch-Nordamerikanische Coleopteren - Synonyma. *Wiener Entomologische Zeittung*, 9 (5), 131–132.
Hoebeke, E.R. & Acciavatti, R.E. (2006) *Hylurgops palliatus* (Gyllenhal) (Coleoptera: Curculionidae: Scolytinae), an Eurasian bark beetle new to North America. *Proceedings of the Entomological Society of Washington*, 108 (2), 267–273.
Hopkins, A.D. (1893a) Catalogue of the West Virginia Scolytidae and their enemies. *West Virginia Agricultural Experiment Station, Bulletin No. 31*, 3 (7), 121–168.
Hopkins, A.D. (1893b) Catalogue of the West Virginia forest and shade tree insects. *West Virginia Agricultural Experiment Station, Bulletin No. 32*, 3 (8), 171–251.
Hopkins, A.D. (1894) Sexual characters in Scolytidae. *The Canadian Entomologist*, 26, 274–280.
Hopkins, A.D. (1902) Insect enemies of the pine in the Black Hills Forest Reserve. *United States Department of Agriculture Division of Entomology, New Series, Bulletin No.* 32, 1–24.
Hopkins, A.D. 1904) Catalogue of exhibits of insect enemies of forests and forest products at the Louisiana purchase exposition, St. Louis, Missouri. *United States Department of Agriculture Division of Entomology, Bulletin No.* 48, 1–56 + XXII plts.
Hopkins, A.D. (1905) Notes on some Mexican Scolytidae, with descriptions of some new species. *Proceedings of the Entomological Society of Washington*, 7 (2–3), 71–82.
Jankowiak, R. (2006). Mycobiota associated with *Hylurgops palliatus* (Gyll.) on *Pinus sylvestris* L. in Poland. *Acta Societatis Botanicorum Poloniae*, 75 (4), 333–338.
http://dx.doi.org/10.5586/asbp.2006.040
Keen, F.P. (1929) *Bark Beetles of the Superfamily Scolytoidea (Ipoidea): Infesting Forest Trees of Western North America, with Keys to the Genera Based on Adult Characters and Work.* United States Department of Agriculture, Bureau of Entomology, Stanford University Press, Palo Alto, California, 129 pp.
Keen, F.P. (1938) *Insect Enemies of Western Forests*. Miscellaneous Publication No. 273, United States Department of Agriculture, Bureau of Entomology and Plant Quarantine, Washington, D.C., 209 pp.
Kelsey, R.G. & Joseph, G. (2003) Ethanol in ponderosa pine as an indicator of physiological injury from fire and its relationship to secondary beetles. *Canadian Journal Forest of Research*, 33, 870–884.
Kirkendall, L.R. (1983) The evolution of mating systems in bark and ambrosia beetles (Coleoptera: Scolytidae and Platypodidae). *Zoological Journal of the Linnean Society*, 77, 293–352.
Kleine, R. (1912) Die geographische verbreitung der Ipiden-Genera orbis terrarum. (Col.). *Berliner Entomololgische Zeitschrift*, 57, 155–192.
Krivolutskaya, G.O. (1996) *Scolytidae*. *In:* Lehr, P.A. (Ed.), *Key to the Insects of the Russian Far East. Vol. III. Part 3 Coleoptera.* Dal'nauka Press, Vladivostok, pp. 312–377. [in Russian]
Kuschel, G. (1995) A phylogenetic classification of Curculionoidea to families and subfamilies. *Memoirs of the Entomological Society of Washington*, 14, 5–33.
LeConte, J.L. (1868) Synopsis of the Scolytidae of America North of Mexico, Appendix. *Transactions of the American Entomological Society*, 2 (1), pp. 150–178.
LeConte, J.L. (1876) Family IX, Scolytidae. *In:* LeConte, J.L. & Horn, G.H. (Eds.), The Rhynchophora of America North of Mexico. *Proceedings of the American Philosophical Society*, 15 (96), pp. 341–391.
Lekander, B. (1968) The number of larval instars in some bark beetle species. *Entomologisk Tidskrift*, 89, 25–34.
Lawrence, J.F., Beutel, R.G., Leschen, R.A.B. & Ślipiński, A. (2010) *Vol. 2. Morphology and Systematics (Elateroidea, Bostrichiformia, Cucujiformia Partim)*. Walter de Gruyter, Berlin, New York, 768 pp.
Lindeman, K. (1875) Vergleichend-anatomische untersuchung über das männliche begattungsglied der borkenkäfer. *Bulletin de la Société Impériale des naturalistes de Moscou*, 49 (1), 197–252.
Little, E.L. Jr. (1971) *Atlas of United States Trees, Volume 1, Conifers and important Hardwoods*. U.S. Government Printing Office, Washington, DC, 9 pp. + 200 maps.
Livingstone, W.H. (1980) *Bark Beetle-Root Relationships, Workshop*. Proceedings Thirty First Annual Western Forest Insect Work Conference, El Paso, Texas, 29 pp.
Livingstone, W.H., Mangini, A.C., Kinzer, H.G. & Mielke, M.E. (1983) Association of root diseases and bark beetles (Coleoptera: Scolytidae) with *Pinus ponderosa* in New Mexico. *Plant Disease*, 67, 674–676.

http://dx.doi.org/10.1094/pd-67-674
Lyal, C.H.C. & King, T. (1996) Elytro-tergal stridulation in weevils (Insecta: Coleoptera: Curculionoidea). *Journal of Natural History*, 30, 703–773.
http://dx.doi.org/10.1080/00222939600770391
Mannerheim, C.G. (1843) Beitrag zur kaefer-fauna der Aleutischen Inseln, der Insel Sitkha und Neu-Californiens. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 16, 3–142.
http://dx.doi.org/10.5962/bhl.title.37833
Mannerheim, C.G. (1852) Zweiter Nachtrag zur Kaefer-fauna der Nord-Amerikanischen Laender des Russischen Reiches. *Bulletin de la Société Impériale des Naturalistes de Moscou*, 25, 284–387.
Mannerheim, C.G. (1853) Dritter nachtrag zur kaefer-fauna der Nord-Amerikanischen laender des Russien reiches. *Bulletin de la'Societe Imperiale des Naturalistes de Moscou*, 26, 95–273.
Munro, J.W. (1917) The genus *Hylastes* and its importance in forestry. *Proceedings of the Royal Physical Society of Edinburgh*, 20, 123–158.
Murayama, J.J. (1963) *Studies in the Scolytid Fauna of the Northern Half of the Far East, V: Hylesininae.* Shukosha Press, Fukuoka, Japan, 72 pp.
Nüsslin, O. (1912) Zur phylogenie und systematik der einheimischen Hylesinen. *Naturwissenschaftlichen Zeitschrift für Forst- und Landwirtschaft*, 32, 267–290.
Oester, P.T., Ryker, L.C. & Rudinsky, J.A. (1978) Complex male premating stridulation of the bark beetle *Hylurgops rugipennis* (Mann.). *The Coleopterists Bulletin*, 32 (2), 93–98.
Otrosina, W.J. & Ferrell, G.T. (1995) Root diseases: Primary Agents and Secondary Consequences of Disturbance. *In:* Eskew, L., (Compiler), *Forest Health through Silviculture, Workshop,* Mescalero, NM. General Technical Report RM-GTR-267, Fort Collins, pp. 87–92.
Patterson, G.K. & Hatch, M.H. (1945) An annotated list of the Scolytoidea of Washington. *University of Washington Publications in Biology*, 10 (4), 145–154.
Peirson, H.B. (1923) *Insects Attacking Forest and Shade Trees*. Bulletin of the Maine Forest Commissioner Maine Forest Service, Augusta, Maine, 56 pp.
Peltonen, M. & Heliövaara, K. (1999) Attack density and breeding success of bark beetles (Coleoptera, Scolytidae) at different distances from forest-clearcut edges. *Agricultural and Forest Entomology*, 1 (4), 237–242.
http://dx.doi.org/10.1046/j.1461-9563.1999.00033.x
Pfeffer, A. (1944) Příspěvek k poznání rodu *Hylastes* Erichs. a *Hylurgops* LeC. *Entomologické Listy*, 7 (4), 97–105.
Pfeffer, A. (1989) *Kůrovcovití Scolytidae a Jádrohlodovití Platypodidae.* Československá Akademie Věd, Nakladatelství ČSAV, Praha, 137 pp.
Pfeffer, A. (1995) *Zentral-und Westpaläarktische Borken-und Kernkäfer.* Basel: Pro Entomologia, c/o Naturhistorisches Museum Basel, Basel, Switzerland, 310 pp.
Reid, R.W. (1955) The bark beetle complex associated with lodgepole pine slash in Alberta. Part I. Notes on the biologies of some Scolytidae attacking lodgepole pine slash. *The Canadian Entomologist*, 87 (7), 311–323.
http://dx.doi.org/10.4039/ent87311-7
Reitter, E. (1913) Bestimmungstabelle der borkenkäfer (Scolytidae) aus Europa und den angrenzenden ländern. *Wiener Entomologische Zeitung*, 32, 1–116.
Riley, C.V. (1891) Corrections to Packard's report on forest tree insects. *Insect Life*, 4 (3–4), 92–94.
Schedl, K.E. (1940) Fauna Mexicana, 1. Insecta Coleoptera, superfamilia Scolytoidea: Scolytidae, Coptonotidae y Platypodidae Mexicanos. *Anales de la Escuela Nacional de Ciencias Biológicas*, 1 (3–4), 317–377.
Schedl, K.E. (1947) Die borkenkafer des balstischen Bernsteins. *Zentralblatt fur das Gesamtgebeit der Entomologie*, 2 (1), 12–45.
Schedl, K.E. (1955) Die kiefern-borkenkafer Guatemalas. 145. Beitrag zur Morphologic und Systematik der Scolytoidea. *Zeitschrift fur Angewandte Entomologie*, 38, 1–48.
Schedl K.E. (1977) Scolytoidea aus El Salvador. 327. Beitrag zur Morphologie und Systematik der Scolytoidea. Zeitschrift der Scolytoidea. Arbeitsgemeinschaft Österreichischer Entomologen, 29(1–2), 41–48.
Schwarz, E.A. (1886) Remarks on North American scolytids. *Entomologica Americana*, 2 (3), 54–56.
Schweigkofler, W., Otrosina, W.J., Smith, S.L., Cluck, D.R., Maeda, K., Peay, K.G. & Garbelotto, M. (2005) Detection and quantification of *Leptographium wageneri*, the cause of black-stain root disease, from bark beetles (Coleoptera: Scolytidae) in Northern California using regular and real-time PCR. *Canadian Journal of Forest Research*, 35, 1798–1808.
Schwerdtfeger, F. (1957) Scolytidae (Col.) an *Pinus*-Arten in Mittelamerika III. Die Gattungen *Hylastes* Erichson und *Hylurgops* Leconte: (6. Beitrag zur Forstentomologie Mittelamerikas). *Deutsche Gesellschaft für Angewandte Entomologie*, 41 (2–3), 363–367.
http://dx.doi.org/10.1111/j.1439-0418.1957.tb01300.x
Snow, F.H. (1881) List of Coleoptera collected in Santa Fe Canon, New Mexico. *Transactions of the Kansas Academy of Science* (1872–1880), 7, 67–71.
Swaine, J.M. (1909) Catalog of the Described Scolytidae of North America North of Mexico, Appendix B, *In:* Felt (Ed.), *24th Report of the State Entomologist*, 1909. New York Education Department Bulletin. New York State University, Albany,

New York, pp. 76–159 + XIV plts.
Swaine, J.M. (1917) Canadian bark beetles, Part 1. Description of new species. *Canada Department of Agriculture, Entomological Branch, Bulletin*, 14 (1), 1–32.
Swaine, J.M. (1918) Canadian bark beetles, Part 2. A preliminary classification, with an account of the habits and means of control. *Canada Department of Agriculture, Entomological Branch, Bulletin*, 14 (2), 1–143 pp + XXXI plts.
Thomas, J.B. (1957) The use of larval anatomy in the study of bark beetles (Coleoptera: Scolytidae). *The Canadian Entomologist*, 89 (Suppl. 5) 3–45 pp.
Thomas, J.B. (1967) A comparative study of gastric caeca in adult and larval stages of bark beetles. *Proceedings of the Entomological Society of Ontario*, 97, 71–90.
Thomson, C.G. (1865) *Skandinaviens Coleoptera, Synoptiskt Bearbetade, Tom. VII*. Tryckt uti Lundbergska boktryckeriet, Lund, Sweden, 394 pp.
Tsai, P. & Huang, F. (1964) Notes on Chinese bark beetles of the genus *Hylurgops* LeConte. *Acta Zootaxonomica Sinica*, 1 (2), 235–246.
Volz, H.-A. (1988) Monoterpenes governing host selection in the bark beetles *Hylurgops palliatus* and *Tomicus piniperda*. *Entomologia Experimentalis et Applicata*, 47, 31–35.
http://dx.doi.org/10.1111/j.1570-7458.1988.tb02278.x
Wickham, H.F. (1913) Fossil Coleoptera from the Wilson Ranch near Florissant, Colorado. *State University of Iowa, Laboratories of Natural History, Bulletin* 6 (4), 29 pp.+ VII plts.
Wood, S.L. (1957) Distributional Notes on and Synonymies of Some North American Scolytidae (Coleoptera). *The Canadian Entomologist*, 89 (9), 396–403.
http://dx.doi.org/10.4039/ent89396-9
Wood, S.L. (1961) A key to the North American genera of Scolytidae. *The Coleopterists Bulletin,* 15(2), 41–48.
Wood, S.L. (1969) New synonymy and records of Platypodidae and Scolytidae (Coleoptera). *The Great Basin Naturalist*, 29 (3), 113–128.
Wood, S.L. (1971a) Family Scolytidae (Ipidae). *In:* Hatch (Ed.), *The Beetles of the Pacific Northwest: Part V: Rhipiceroidea, Sternoxi, Phytophaga, Rhynchophora, and Lamellicornia.* University of Washington Press, Seattle, pp. 395–428.
Wood, S.L. (1971b) New species of bark beetles (Coleoptera: Scolytidae) from western North America. *The Great Basin Naturalist*, 31 (2), 69–76.
Wood, S.L. (1971c) New synonymy in American bark beetles (Scolytidae: Coleoptera). *The Great Basin Naturalist*, 31 (3), 140–152.
Wood, S.L. (1978) A reclassification of the subfamilies and tribes of Scolytidae (Coleoptera). *Annales de la Société Entomologique de France, nouvelle série*, 14, 95–122.
Wood, S.L. (1982) The bark and ambrosia beetles of North and Central America (Coleoptera: Scolytidae), a taxonomic monograph. *Great Basin Naturalist Memoirs*, 6, 1–1359.
Wood, S.L. (1986) A reclassification of the genera of Scolytidae (Coleoptera). *Great Basin Naturalist Memoirs*, 10, 1–126.
Wood, S.L. & Bright, D.E. (1992) A catalog of Scolytidae and Platypodidae (Coleoptera), part 2: taxonomic index. *Great Basin Naturalist Memoirs*, 13, 1–1553.
Yin, H.-F, Huang, F.-S. & Li, C.-L. (1984) *Economic Insect Fauna of China*. *Fasc. 29*, *Coleoptera: Scolytidae*. Science Press, Beijing, 205 pp + XIX plts.