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A TAXONOMIC MONOGRAPH OF NEARCTIC SCOLYTUS GEOFFROY (COLEOPTERA, CURCULIONIDAE, SCOLYTINAE) by Sarah M. Smith, Anthony I. Cognato



A TAXONOMIC MONOGRAPH OF **NEARCTIC SCOLYTUS GEOFFROY** (COLEOPTERA, CURCULIONIDAE, SCOLYTINAE)

BY SARAH M. SMITH, ANTHONY I. COGNATO



Scolytus mali (Bechstein, 1805)

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in part on a molecular and morphological phylogeny. Monophyly of the native species was tested using mitochondrial (COI) and nuclear (28S, CAD, ArgK) genes and 43 morphological characters in parsimony and Bayesian phylogenetic analyses. Parsimony analyses of molecular and combined datasets provided mixed results while Bayesian analysis recovered most nodes with posterior probabilities >90%. Native hardwood- and conifer-feeding Scolytus species were recovered as paraphyletic. Native Nearctic species were recovered as paraphyletic with hardwood-feeding species sister to Palearctic hardwood-feeding species rather than to native conifer-feeding species. The Nearctic conifer-feeding species were monophyletic. Twenty-five species were recognized. Four new synonyms were discovered: S. praeceps LeConte, 1868 (= S. abietis Blackman, 1934; = S. opacus Black-man, 1934), S. reflexus Blackman, 1934 (= S. virgatus Bright, 1972; = S. wickhami Blackman, 1934). Two species were reinstated: S. fiskei Blackman, 1934 and S. silvaticus Bright, 1972. A diagnosis, description, distribution, host records and images were provided for each species and a key is presented to all species.

The Nearctic bark beetle genus Scolytus Geoffroy was revised based

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