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**A synoptic review of the ants of California
(Hymenoptera: Formicidae)**

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ABSTRACT

The taxonomy and composition of the California ant fauna is reviewed, leading to the recognition of 281 species (in 44 genera), of which 255 are considered indigenous and 39 are endemic. Species-level endemism (13.9%) is higher than in adjacent regions, as is the percentage of non-native species (9.3%). About one quarter of the indigenous ant species are endemic to the California floristic province (*sensu* Hickman 1993). Approximately 36 species appear to be undescribed. Most of these undescribed species are assigned code names, which match those used on the “Ants of California” web site (<http://www.antweb.org/california.jsp>). One new species is described, *Camponotus maritimus* Ward, **sp. nov.**, which corresponds to the taxon previously called *Camponotus maculatus* subsp. *vicinus* var. *maritimus* Wheeler (unavailable quadrinomen). Three species names are revalidated: *Leptothorax calderoni* Creighton **stat. reval.**, **stat. nov.**, *Myrmica glacialis* Emery

stat. reval., stat. nov., and *Temnothorax rudis* (Wheeler) **stat. reval., comb. nov.** The following **new synonymy** is proposed (senior synonym listed first): *Forelius pruinosus* (Roger) = *F. analis* (André); *Monomorium ergatogyna* Wheeler = *M. wheelerorum* DuBois; *Temnothorax andrei* (Emery) = *T. nitens heathii* (Wheeler) = *T. nitens occidentalis* (Wheeler) = *T. ocellatus* (MacKay); *Temnothorax nevadensis* (Wheeler) = *T. lindae* (MacKay) = *T. maryanae* (MacKay); *Temnothorax nitens* (Emery) = *T. mariposa* (Wheeler) = *T. melinus* (MacKay). The genus *Acanthomyops* Mayr is demoted to subgenus (**stat. rev.**) within *Lasius* Fabricius, in accord with recent molecular phylogenetic results. A key to the ant genera of California (based on the worker caste), a synopsis of each genus, a comprehensive bibliography, and a species list are also provided.

Keywords. ant taxonomy, distribution, biogeography, endemism, *Camponotus*, *Lasius*, *Forelius*, *Monomorium*, *Myrmica*, *Leptothorax*, *Temnothorax*

INTRODUCTION

Like other components of the California biota, the ant fauna of this state shows considerable biological diversity and regional endemism. Yet there has been no comprehensive systematic treatment of the ants of California, much less a reliable checklist or a set of identification keys. Part of this stems from the complexity of the fauna and an attendant rash of taxonomic problems whose resolution requires additional study at a larger geographical scale. In light of these constraints, the present paper aims to provide no more than a cursory survey of the ant genera, a provisional list of species, and a guide to the literature. A few necessary taxonomic changes are introduced, mostly involving new synonymy at the species level. A prime motivation for this paper stems from the need to establish a reference checklist for a new web site illustrating the ants of California (<http://www.antweb.org/california.jsp>). This web site, developed in collaboration with Brian Fisher (California Academy of Sciences), is designed to facilitate identification by providing high-quality digital images of the known California ant species.

The first descriptions of California ants appeared in the nineteenth and early twentieth century, in widely scattered taxonomic papers by Buckley, Emery, Forel, Mayr, W. M. Wheeler and others. Mallis (1941) and Cook (1953) published a species list and a book-length treatment, respectively, of the ants of California but both of these are out-of-date and error-ridden. Revisionary studies on specific groups of ants, carried out within the last 60 years and usually at a continent-wide scale, have had a more salutary effect on our knowledge of the California ant fauna. This includes taxonomic contributions by Bolton (1979), Brown (1950d, 1953g), Buren (1968b), Cole (1968), Creighton (1950a), Francoeur (1973), Gregg (1959, 1969b), Mackay (2000), Snelling (1970, 1973c, 1976, 1982a, 1982b, 1988, 1995a), Trager (1984b, 1991), Ward (1985b, 1999), Watkins (1976, 1985), Wilson (1955a, 2003) and Wing (1968a). Among the more useful publications for those seeking information about the ants of California are the regional treatments of the ants of Deep Canyon, Riverside County (Wheeler & Wheeler 1973e), the California deserts