Novitates Paleoentomologicae

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Introducing *Novitates Paleoentomologicae*: An outlet for occasional fossil insect research at the University of Kansas

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Abstract. A new journal is introduced which disseminates the results of research conducted at or in association with the University of Kansas on fossil insects and their relatives. The journal spans all aspects of paleoentomological research, extending beyond systematic studies to include works on insect-bearing deposits, and their taphonomy and paleoecology.

INTRODUCTION

With approximately one million described species, the insects are the most diverse lineage of all life. Insects dominate virtually all terrestrial and many freshwater ecosystems and play critical roles in the functioning and health of natural and human-maintained environments. Not surprisingly, this tremendous wealth of species and variation in biology is quite ancient, with early evidence of insects extending back well into the Paleozoic, at least 410 million years ago (Engel & Grimaldi, 2004). During their long history, insects were the first to develop powered flight (Engel *et al*., 2013), develop elaborate systems of visual, auditory, and even abstract communication systems (*e.g*., Frisch, 1965; Shevstova *et al*., 2011; Gu *et al*., 2012), evolve complex societies (*e.g*., Engel *et al*., 2007, reviewed in Grimaldi & Engel, 2005) and forms of architecture (*e.g*., Rennie, 1888; Wiggins, 1996; Grimaldi & Engel, 2005), and even achieve sustainable agriculture and animal husbandry (*e.g*., Johnson *et al*., 2001; Mueller *et al*., 2005). All of these landmarks in evolution are obviously historical phenomena and intimately tied to the peculiar ecologies and abiotic events of the periods in which they arose. Accordingly, it is only natural to assume that any meaningful study of insect diversity

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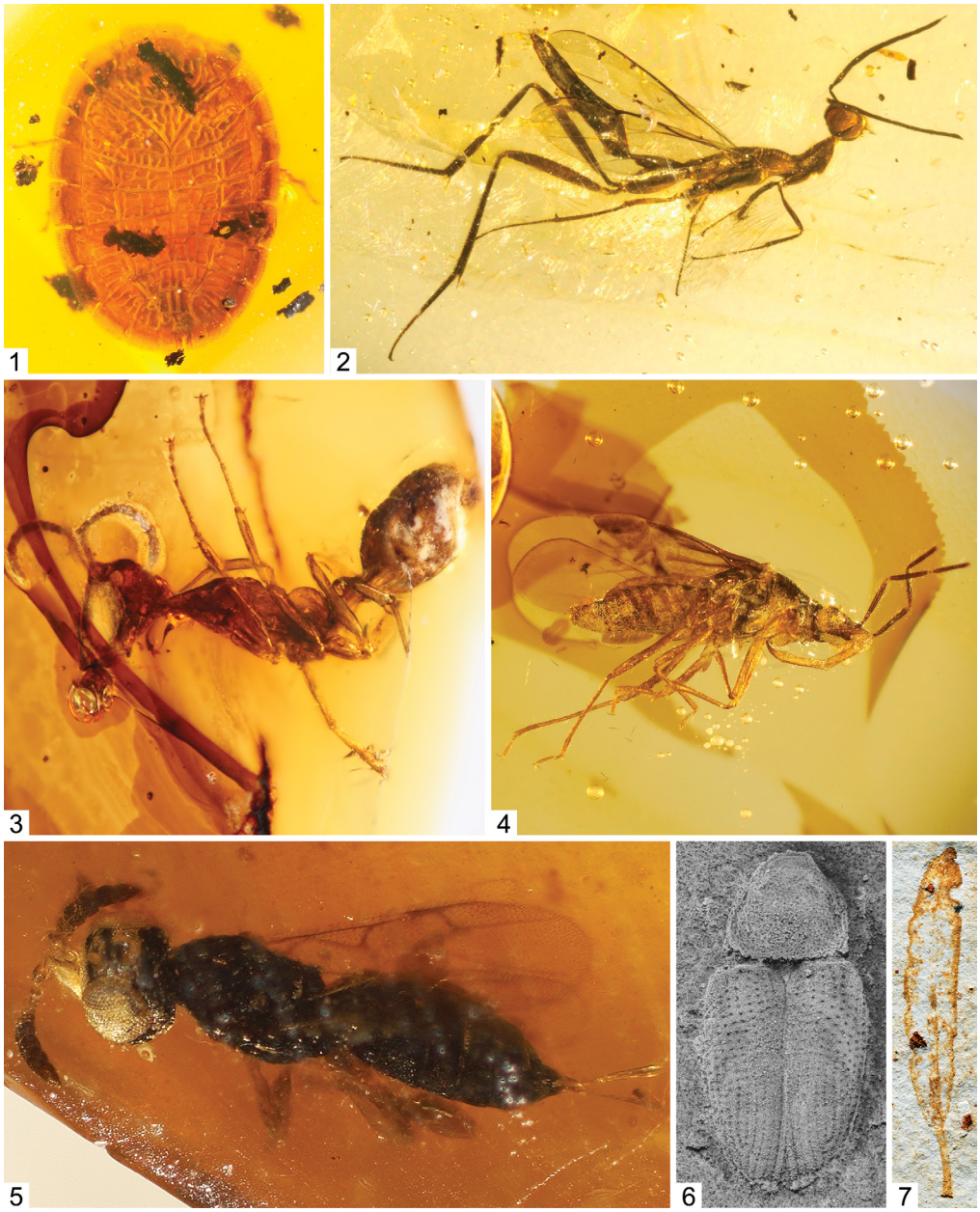

Figures 1–6. Representative fossil material within the scope of the journal. **1.** *Termitaradus mitnicki* Engel, 2009a, a termite bug from Miocene Dominican amber. **2.** *Leptofoenus pittfieldae* Engel, 2009b, a pteromalid wasp from Dominican amber. **3.** *Haidoterminus cippus* McKellar, Glasier, & Engel, 2013, a trap-jawed ant from Late Cretaceous Canadian amber. **4.** *Popovophysa entzmingeri* McKellar & Engel, 2011, a microphysid bug from Canadian amber. **5.** Undescribed scelionid wasp (Ortega-Blanco *et al*., in prep.), from Early Cretaceous Spanish amber. **6.** Polyphagan beetle cast, compression fossil from Late Cretaceous of Gara es Sbâa, Morocco. **7.** *Phagophytichnus ekowskii* van Amerom, 1966, an insect feeding trace from Gara es Sbâa. (Images modified from Engel, 2009a, 2009b; Engel *et al*., 2012; McKellar & Engel, 2011; McKellar *et al*., 2013.).

should be inextricably woven into a critical examination of their extensive geological past. Shockingly, the fossil record of insects is still often ignored or used incorrectly in modern research, although the trend is increasingly positive and today paleoentomology is certainly richer and more deeply and widely appreciated than in preceding decades. Indeed, much of this shift has been achieved by two prominent tomes produced during the first decade of the 21st Century (Rasnitsyn & Quicke, 2002; Grimaldi & Engel, 2005).

Despite the considerable diversity of fossil insects and the rather numerous variety of journals dedicated to their living descendants, relatively few serials have focused on disseminating the results of paleoentomological research. Earlier journals such as *Bernstein-Forschungen*, published in four issues between 1929 and 1939 under the editorship of Karl Erich Andrée (1880–1959), was restricted to work on Baltic amber and although heavily populated by work on insect inclusions also published more broadly on amber studies. The longest running serial was the newsletter *Inclusion-Wrostek*, produced by Jan Koteja (1932–2004), it was initiated in 1985 and ran for nearly 20 years. *Inclusion-Wrostek*, like *Bernstein-Forschungen*, was dedicated to work on amber and, obviously, had a heavy load of paleoentomological findings and communications. The formal serial *Amber & Fossils*, issued by the Museum of the World Ocean in Kaliningrad, was, like the preceeding titles, devoted to amber research. Given the preponderance of arthropods preserved in amber it is not surprising that most of the articles concerned insects. Sadly, the journal appeared as a single issue in 1995 and quickly vanished, and copies are difficult to locate even today. Another newsletter under the name *Meganeura*, was the first devoted broadly to paleoentomology and, given its informal nature, included announcements ranging from meetings to recent literature and small segments on new discoveries. *Meganeura* served the very important purpose of fostering communication among the world's researchers and was published in hardcopy for four issues between 1997 and 1999, with a fifth issued online only during 2000. The most recent attempt was *Alavesia*, a journal of the International Palaeoentomological Society, which produced three issues between 2007 and 2010. Although efforts are underway to initiate new journals and newsletters, at the moment none are active.

To fill the aforementioned void, we here launch the journal *Novitates Paleoentomologicae*. The journal's name is a nostalgic reference to two previous journals that published significant findings in systematic entomology. The first, *Novitates Zoologicae*, was a journal associated with the Tring Museum, a private museum owned by Baron Lionel Walter Rothschild FRS (1868–1937) that was bequeathed to the United Kingdom upon his death and became a part of the Natural History Museum, London (since 2007 under the name, "Natural History Museum at Tring"). Rothschild's insects were largely curated and researched by Heinrich Ernst Karl Jordan FRS (1861–1959), who published numerous discoveries in *Novitates Zoologicae*. The journal ran from 1895 until 1948. The second journal was *Novitates Entomologicae*, a French serial which ran from 1931 until 1944. Established by Eugène Le Moult (1882–1967), *Novitates Entomologicae* featured numerous papers on the systematics and biology of insects, particularly Lepidoptera and Coleoptera. Thus, in the tradition of these two serials we titled the present journal, *Novitates Paleoentomologicae*, with the purpose of presenting the occasional results of research on fossil insects undertaken at the University of Kansas.

Novitates Paleoentomologicae is an online, open-access serial dedicated to paleoentomological research in its broadest sense, including related fossil arthropod lineages as well as topics ranging from the proper curation and conservation of material and

taphonomy to the dating and discovery of new deposits with insects. The journal covers the full expanse of preservational modes, from amber inclusions and compressions to trace fossils and subfossil material (Fig. 1), as well as material from all epochs of the geological past. Each article is issued separately with a unique number and appearing as they are ready. Taxonomic issues are registered in ZooBank and archived at the University of Kansas and in Portico, thereby satisfying the latest regulations of the *International Code of Zoological Nomenclature* (ICZN, 2012). The journal publishes the results of research undertaken in association with the University of Kansas. Authors not associated with the University of Kansas should contact one of the editors if they believe their work is suitable for *Novitates Paleoentomologicae*. For more information consult the journal's website at http://journals.ku.edu/paleoent

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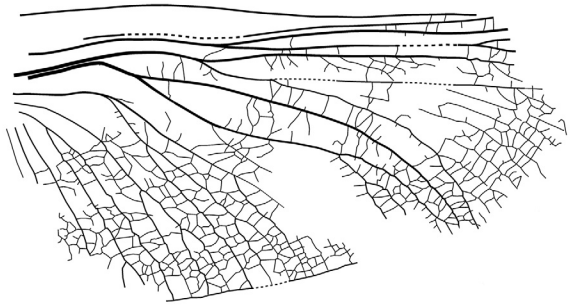

Pharciphyzelus lacefieldi Beckemeyer & Engel, 2011

NOVITATES PALEOENTOMOLOGICAE

Occasional Contributions to Paleoentomology

Novitates Paleoentomologicae is an international, open access journal that seeks to disseminate the results of research conducted on fossil arthropods, particularly fossil insects, at the University of Kansas. The journal covers all aspects of fossil arthropod research including, but not limited to, comparative morphology, paleobiology, paleoecology, phylogenetics, systematics, taphonomy, and taxonomy.

Novitates Paleoentomologicae was established at the University of Kansas through the efforts of Michael S. Engel, Jaime Ortega-Blanco, and Ryan C. McKellar in 2013 and each article is published as its own number, with issues appearing online as soon as they are ready. Papers are composed using Microsoft Word® and Adobe InDesign® in Lawrence, Kansas, USA.

Novitates Paleoentomologicae is registered in ZooBank (www.zoobank.org), archived at the University of Kansas and in Portico (www.portico.org), and printed on demand by Southwestern Oklahoma State University Press.

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