

The formicine ant genus *Plagiolepis* Mayr (Hymenoptera: Formicidae) in the Arabian Peninsula, with description of two new species

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ABSTRACT

The formicine ant genus *Plagiolepis* in Arabia is reviewed and an identification key to the worker caste is given. Eight species are recognized, two of which, *P. boltoni* and *P. juddi* are described as new. Two species, *Plagiolepis abyssinica* Forel and *Plagiolepis schmitzii* Forel are redescribed.

KEYWORDS Formicinae, *Plagiolepis*, new species Palaeartic, Arabia, keys.

This paper is one step towards a revision of the ant genera of the Arabian Peninsula (Arabia), many of which are in need of comprehensive taxonomic study at species rank. The formicine ant genus *Plagiolepis* was created by Mayr (1861), with *Formica pygmaea* Latreille, 1798 later designated as the type species by Wheeler (1911). Member species can be recognized easily by the combination of the following characters in the worker caste: Mandibles armed with five teeth; clypeus large and projecting over the basal borders of the mandibles; palp formula 6,4; antennae 11-segmented, and eyes well developed. In dorsal view, the mesonotum is separated from the metanotum by a conspicuous transverse groove or impression, therefore the metanotum forms a distinctly isolated sclerite. The propodeum is unarmed, and the petiole is a reduced scale, inclined forward and sometimes overhung by the first gastral segment.

Plagiolepis is one of the largest and taxonomically most difficult genera in the subfamily Formicinae, with 80 species distributed in the Old World tropics and temperate areas (Bolton, 1995; Brown, 2000). The species nest in a number of different sites; under tree bark, in rotten wood or twigs (*P. abyssinica*), in soil litter (*P. maura*, *P. pallescens*), under stones (*P. schmitzii*), or in hard-packed soil (*P. exigua*) (Collingwood, 1985, Collingwood & Agosti, 1996, Sharaf, 2006). Very few studies have been done on the Palaeartic *Plagiolepis* fauna which include

Palaeartic Russia (Radchenko, 1989), and Central and Southern Palaeartic region (Radchenko, 1996); and, *Plagiolepis* of the Arabia have received little attention. The first record from Arabia was of *P. pygmaea* (Latreille) collected in the 1930's from Jebel Musmah by Scott and E. B. Sutton (Collingwood, 1985). Fifty-five years later, Collingwood (1985) reported four species, *P. abyssinica* (elevated to species rank), *P. pygmaea*, *P. schmitzii*, and *P. maura* Santschi. Collingwood and Agosti (1996) added *P. exigua* from Yemen. Recently, a new species, *P. breviscapa*, from Yemen was described by Collingwood and van Harten (2005). None have been reported from the United Arab Emirates, Qatar, Bahrain, and Kuwait. Here, two new species, *P. boltoni* and *P. juddi*, are described and two species, *P. abyssinica* and *P. schmitzii* are redescribed.

MATERIALS AND METHODS

Standard measurements in mm, and indices follow Bolton (1987):

TL = Total Length; the outstretched length of the ant from the mandibular apex to the gastral apex.

HW = Head Width; the maximum width of the head behind eyes in full face view.

HL = Head Length; the maximum length of the head, excluding the mandibles.