

SHORT COMMUNICATION

New records of ant species (Hymenoptera: Formicidae) to the fauna of Iran: *Camponotus alii* Forel, 1890 and *Proformica korbi* (Emery, 1909)

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The family of ants (Formicidae), belonging to the order Hymenoptera is an important part of terrestrial biodiversity. Due to their high variability, high population, important role in the ecosystem and easy sampling, ants are responsible as model organisms for a wide range of scientific research including studies in behavior, ecology and evolutionary biology (Andersen *et al.* 2003). The family Formicidae has 16 valid existing and four extinct subfamilies and currently 13,061 described species (Bolton 2014). Despite the high diversity of the ant fauna, few studies have been published on this group of insects in Iran (Forel 1904; Radchenko 1996; Radchenko 1997; Paknia & Kami 2007; Paknia *et al.* 2010; Firouzi *et al.* 2011; Mohammadi *et al.* 2012; Kiran *et al.* 2013). The present study was carried out in Mashhad, Khorasan-e-Razavi province and found two new species of Formicidae for Iran.

From March to November 2013, a field survey was carried out in Mashhad, Khorasan-e-Razavi Province, Iran. Insect specimens were collected using an aspirator from different parts of the ash tree, *Fraxinus excelsior* L. and were stored in 70% ethanol. The specimens were identified by Dr Kadri Kiran and Dr Celal Karaman from Trakya University, Turkey.

The species *Camponotus alii* Forel, 1890 and *Proformica korbi* (Emery, 1909), both considered as the new records for Iran, were collected from the trunk of an ash tree,

F. excelsior. No colony of the ant species was detected on the trees. These species belong to the subfamily Formicinae. *Camponotus alii* is a member of the tribe Camponotini and *Proformica korbi* belongs to the tribe Formicini.

Camponotus alii Forel, 1890

MATERIAL EXAMINED

1 ♀ (worker), steppe land, Mashhad city (36°15'N, 59°38'E) Khorasan-e-Razavi province, 985 m a.s.l., 09. x. 2013, leg. F. Khandehroo, det. Celal Karaman (Fig. 1).

Proformica korbi (Emery, 1909)

MATERIAL EXAMINED

1 ♀ (worker), steppe land, Mashhad city (36°15'N, 59°38'E) Khorasan-e-Razavi province, 985 m a.s.l., 09. x. 2013, leg. F. Khandehroo, det. Kadri Kiran (Fig. 2).

The present study reported two species of ants on ash tree *F. excelsior* in Mashhad, Iran, both of which were workers. So far, 181 species of ants have been recorded from Iran (Forel 1904; Radchenko 1996; Radchenko 1997; Paknia & Kami 2007; Paknia *et al.* 2010; Firouzi *et al.* 2011; Mohammadi *et al.* 2012; Kiran *et al.* 2013; Hosseini *et al.* 2015, this issue of Asian

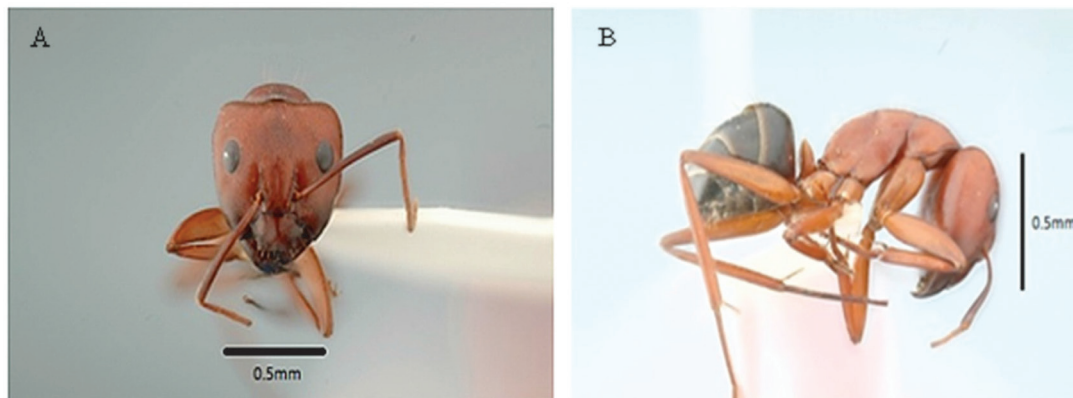


Fig. 1. *Camponotus alii* Forel, 1890: A. Front view; B. Lateral view.

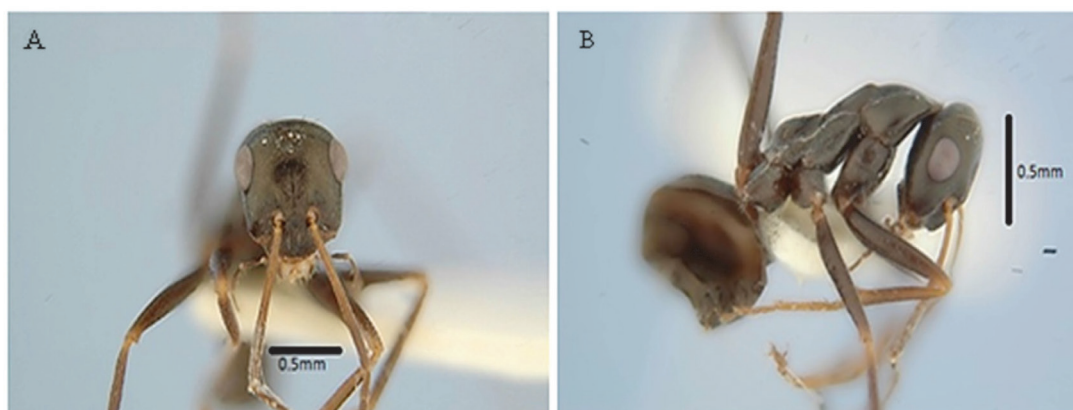


Fig. 2. *Proformica korbi* (Emery, 1909): A. Front view; B. Lateral view.

Myrmecology), summing up to 183 species with two newly reported species in the present study. As ant fauna of many areas of Khorasan-e-Razavi province has not been explored until now, further research will certainly add more species to the Formicidae. As the colonies of ant species were not found, their ecological importance on ash trees needs to be further investigated.

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REFERENCES

- Andersen A, Hoffmann B and Somes J, 2003. Ants as indicators of mine site restoration community recovery at one of eight rehabilitation sites in central Queensland. *Ecological Management Restoration* 4: 12–19.
- Bolton B, 2014. An online catalog of the ants of the world. Available from <http://antcat.org>. (accessed 17.03.2015).
- Firouzi F, Pashaei Rad S, Hossein Nezhad S and Agosti D, 2011. Four new records of ants from Iran (Hymenoptera: Formicidae). *Zoology in the Middle East* 52: 71-78.
- Forel A, 1904. Dimorphisme du mâle chez les fourmis et quelques autres notices myrmécologiques. *Annales de la Société Entomologique de Belgique* 48: 421-425.

- Hosseini A, Modarraes Awal M and Hosseini M, 2015. New Faunistic Records of Formicidae (Insecta: Hymenoptera) From Northeastern Iran. *Asian Myrmecology* 7: 113 – 127.
- Kiran K, Alipanah H and Paknia O, 2013. A new species of the ant genus *Aphaenogaster mayr* (Hymenoptera: Formicidae) from Iran. *Asian Myrmecology* 5(1): 45-51.
- Mohammadi S, Mossadegh MS and Esfandiari M, 2012. Eight ants species (Hymenoptera: Formicidae) new for the fauna of Iran. *Munis Entomology & Zoology Journal* 7(2): 847-851.
- Paknia O and Kami HG, 2007. New and additional records for the formicid fauna (Insecta: Hymenoptera) of Iran. *Zoology in the Middle East* 40(1): 85-90.
- Paknia O, Radchenko A and Pfeiffer M, 2010. New records of ants (Hymenoptera: Formicidae) from Iran. *Asian Myrmecology* 3: 29- 38.
- Radchenko A, 1996. Key to the ants of the genus *Camponotus* (Hymenoptera, Formicidae) from Asian Palaearctic. *Zoologicheskii Zhurnal* 75: 1195-1203.
- Radchenko A, 1997. Review of ants of the subgenus *Myrmentoma* genus *Camponotus* (Hymenoptera, Formicidae) of the Asian Palearctic. *Zoologicheskii Zhurnal* 76: 703-711.

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