

margins, and an almost unsculptured pronotum and anterior part of the mesonotum in the worker. However, *A. japonica* and *A. famelica* are sometimes difficult to distinguish. In its general shape, *A. famelica* is larger and more slender, and has relatively longer antennae and legs than *A. japonica*. Furthermore, in *A. japonica* the body sculpture is stronger and the mesonotum has a peculiar angular prominence in its anterior portion, this latter state forming the basis for the previous consideration of *japonica* as a subspecies of *A. smythiesii*. However, in all these characters, smaller specimens of *A. japonica* are similar to larger specimens of *A. famelica*, except in body size. This means that we must compare specimens of the same size class. The most reliable character may be the relative length of the antennal scape; it is generally more than 1.5 times longer than the head width in *A. famelica*, whereas it is much less than 1.5 times as long in *A. japonica*, although a few exceptions have been found in *A. famelica*.

In Wheeler's era taxonomists encountered much difficulty in getting sufficient material from remote places; many subspecies, varieties and forms were described that merely represented intraspecific variations. Even today, museum taxonomists working remotely from the sites where their material was collected often cannot get information that is crucial for recognizing closely related biological species (Yamane 1996) and, thus, their approaches tend toward typology. I would like to emphasize that the making of a complete inventory of a local fauna with ecological and behavioral information will be extremely important for the next generation of ant taxonomy.

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References

- Bolton, B. 1995. A New General Catalogue of the Ants of the World. 504 pp. Harvard University Press.
- Collingwood, C. A. 1976. Ants (Hymenoptera, Formicidae) from North Korea. *Annales Historico-Naturales Musei Nationalis Hungarici* 68: 295-309.
- Emery, C. 1921. Hymenoptera, Fam. Formicidae, subfam. Myrmicinae. *In: Wytsman, P. (Ed.), Genera Insectorum*, Fasc. 174A, pp. 1-94. Bruxelles.
- Forel, A. 1911. Die Ameisen des K. Zoologischen Museums in München. *Sitzungsberichte der Königlichen Bayerischen Akademie der Wissenschaften Mathematisch-Physikalische Klasse* 1911: 249-303.
- Imai, H.-T. 1971. Karyological studies of Japanese ants. II. Species differentiation in