

Discriminant analysis on nest means allows for an absolute separation of both morphologies. The discriminant function is : $D = 3.98 + 82.2 HW - 61.6 HL - 26.3 SL$. For Asian samples D varies from -4.77 to -1.51 and for European samples D is 1.22 to 5.48. We need to stress that our measurements on Asian samples are coincident with YAMAUCHI's (1979, Table 4) and KUPYANSKAYA's (1989, table) data ; we remind that Kupyanskaya studied samples mainly from the Soviet Far East Russia and Siberia. Moreover, the direct comparison among Japanese, Korean, and Far East Russian specimens concluded that there is no significant differences in morphology. This indicates that Japanese samples, Korean and Far East Russian samples all belong in the same morphospecies.

For the queen caste, differences go in the same sense as in workers ; specifically, the ground pubescence is much more developed in Japanese samples. Hairiness (erect hairs over the body) both in length and abundance, is stronger in Japanese queens. Absolute size, as measured by head width and length, is smaller in Japanese queens, as was described by WILSON (1955) for the Odawara queens. Head proportions are also significantly different (Table 1), with the scape proportionately shorter and the head proportionately wider in European samples.

Males are usually very similar in morphology among the species within the genus *Lasius*. In correspondence with the smaller females, the males of Japanese samples are also smaller in absolute size than those of European samples. The scapes are also proportionately longer in Japanese males (SL/HW behind the eyes : 79.7 ± 2.3) than in European males (75.3 ± 1.8 ; t-test, $t = 3.6$; $p < 0.01$). The differences in pubescence found in female castes are maintained in the males : Japanese males have a much denser pubescence in the gaster than in European males. We have been unable to find consistent differences in any of the many pieces that constitute the genitalia.

Mandibular gland content : from Japanese specimens, two major compounds were found both in the extracts of the mandibular gland and whole bodies. One was dendrolasin (QUILICO *et al.*, 1957), and the other was 3-formyl-7,11-dimethyl-(2E,6Z,10) dodecatrienal (AKINO *et al.*, 1995a). Both compounds were eluted with 10% ether-in hexane from silica gel. In the mandibular gland, the latter compound was approximately 20 times as much as the dendrolasin. Their relative ratio was almost identical in the whole body extract. 3-formyl-7,11-dimethyl-(2E,6Z,10)-dodecatrienal is a strong antifungal and antibacterial compound. (AKINO *et al.*, 1995b). By contrast, only dendrolasin was contained as the major component in the mandibular gland and also in the whole body extract of European specimens. A negligible amount of 3-formyl-7,11-dimethyl-(2E,6Z,10)-dodecatrienal was detected. Such difference in the major gland secretion suggests that the two species have different metabolic systems to synthesize the chemicals. However, this possibility needs to be checked because an alternative source for the compound might be their symbiotic fungi.

Geographical distribution : the species distribution of *L. fuliginosus*, in its present concept, as outlined by WILSON (1955), KUPYANSKAYA (1989), COLLINGWOOD (1979), AGOSTI & COLLINGWOOD (1987), HEINZE & KAUFMANN (1993) and own observations was up to latitude 62° N in southern Fennoscandia to the British Islands and from 40° N at the Iberian Peninsula, Italy, Greece and sparse localities in Turkey, a more southern record from Lebanon and an extreme eastern one from Crimea. Then, an enormous gap is found between Europe and its surrounding area and East Asia, where it is abundant in Japan, Korea and Far East Russia. There remain three enigmatic records that merit consideration and eventual confirmation. BINGHAM (1903) identified *L. fuliginosus* from Thana, Bombay (India) and WILSON (1955) mentioned a single specimen from Tutu River, North Borneo ; this last author expressed doubts about the reliability of both records. In addition, COLLINGWOOD (1982) identified two workers labelled Dharwan, Mysore (India). Those three localities, if confirmed, are remarkably southern in distribution, whichever species they concern, for the genus *Lasius*. In spite of old references by FOREL (1906)