

A nest of a *Myrmica* species was disclosed on September 21st, 1961, on the gravel bank extending along the coast northward from Deal in East Kent. The nest was in the protection of a clump of sea buckthorn. A single male was seen among workers near the surface of the nest and identified as *M. puerilis* Staercke. The workers were very similar to those of *M. scabrinodis* Nyl. in superficial appearance and size, but were more aggressive and stung freely. This species was described by Staercke (1942) from clear differences in the male from both that of *M. scabrinodis* and the more nearly similar *M. rugulosa* Nyl. Neither Staercke nor Boven (1959), however, were able to distinguish the female castes satisfactorily from those of *M. scabrinodis*. Wolf (1954) gave more precision to the male description by incorporating in a key a number of additional criteria including proportional lengths of leg and antennal segments. Sadil (1951) in his fine revision of Czechoslovakian *Myrmica* did not mention *M. puerilis*, but described as new a species *M. balcanina* from nest series taken in Czechoslovakia and neighbouring countries making use of scape and petiole shape characters to distinguish the species in all castes from *M. scabrinodis*. From a careful reading of his description, it seems to me probable that *balcanina* Sadil is the same as *puerilis* Staercke, but no formal synonymy can be made until actual named specimens are compared.

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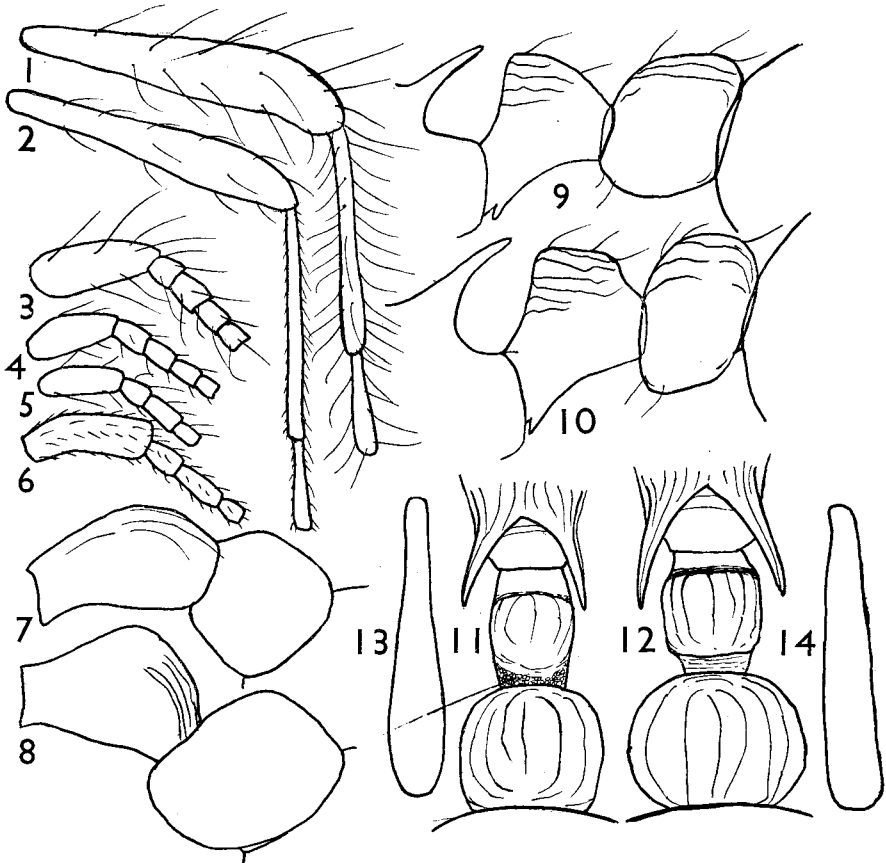
Netherlands, Belgium, N.W. Germany (Staercke, 1942; van Boven, 1959; Wolf, 1954). Switzerland (Bibikoff collection). Czechoslovakia, Bulgaria, Yugoslavia as '*balcanina*' (Sadil, 1951). In England only the one locality is so far known. Although I have been on the look out for this species for some years, I have no other British representatives in my collection nor have I seen such in any of the provincial museum collections that I have looked at. Dr. I. H. H. Yarrow has kindly confirmed that there are no English examples in the British Museum collections. In the Netherlands the distribution is mainly coastal including the Frisian islands. Sadil (1951) describes *M. balcanina* as a steppe species confined to warm dry localities. It is obvious that this ant could easily be overlooked since the female castes are so similar to those of *M. scabrinodis*, but the general absence of the characteristic *M. puerilis* male from collections of *Myrmica* species suggests that it is at least rather local. In many ways the workers have characters that come between *M. rugulosa* and *M. scabrinodis* and the species may be included in some collections under the name var. *rugulosoides* Forel, but this last includes any of the more weakly sculptured forms of *M. scabrinodis* and is so vaguely described as to have no taxonomic validity.

Myrmica puerilis Staercke

The male has the antennal scape short as in *M. scabrinodis*, but paler and more slender, and the body and appendage hairs are shorter and sparser. Together with *M. rugulosa* and *M. schencki* it is at once distinguished from either *M. scabrinodis* or *M. sabuleti* Mein. by the hind tarsal hairs which are much shorter on the underside than on the overside whereas in the latter species they are subequal. *M. puerilis* differs from *M. schencki* by the larger, less sculptured petiole node, the shorter second funiculus segment of the antenna and the absence of any depression on the head in front of the median ocellus. It is generally similar in its slender appearance and light colouring to *M. rugulosa*, but the petiole node is larger and flattened above so that the dorsal and anterior faces seen in profile make a much more obtuse angle than in *M. rugulosa* where these form a near right angle with the petiole shorter and higher. There are other useful distinctions including the antennal scape which is as long as the next $2\frac{1}{2}$ funiculus segments, the first funiculus segment is about as long as the second, the hind tibia is slightly longer than the metatarsus. In *M. rugulosa* the scape is as long as the next three following

segments, the second funiculus segment is clearly longer than the first and the hind tibia and metatarsus are approximately the same length.

The female castes can only be confused with *M. scabrinodis* as the scape is distinctly angled with a more or less discernible lateral lobe. According to Sadil (1951) this is rather variable in *M. balcanina* and the Deal examples certainly have a much slighter lobar extension at the angle of the scape than in some examples from Belgium kindly lent by Dr. J. K. A. van Boven. The sculpturing is weaker than in most forms of *M. scabrinodis* with the sides of the head and petiole having a distinctive punctulate micro-sculpture. The epinotal spines are shorter, the frontal ridges are less divergent and the femora have the proximal ends narrower for a greater length than in *M. scabrinodis*. The best distinction lies in the shape of the petiole nodes. In *M. puerilis*, the outline from above is rectangular with the dorsal area of the node forming a small rounded dome; in profile the dorsal crest slopes more or less evenly to the postpetiole. The postpetiole is more or less spherical from above and rather square in profile. In both *M. scabrinodis* and *M. sabuleti* the petiole is higher and more massive with the flattened dorsal area distinctly angled posteriorly forming an abrupt step to its junction with the postpetiole. The postpetiole is distinctly higher than wide in profile.



FIGS. 1-14.—1, Hind tibia and metatarsus, *M. scabrinodis* Nyl., ♂; 2, do., *M. puerilis* Stke., ♂; 3, antennal scape and first funiculus segments, *M. scabrinodis* Nyl., ♂; 4, do., *M. puerilis* Stke., ♂; 5, do., *M. rugulosa* Nyl., ♂; 6, do., *M. schencki* Em., ♂; 7, petiole and postpetiole in side view, *M. puerilis* Stke., ♂; 8, do., *M. scabrinodis* Nyl.; 9, do., *M. puerilis* Stke., ♀; 10, do. from above, *M. scabrinodis* Nyl., ♀; 11, do., *M. puerilis* Stke., ♀; 12, do., *M. scabrinodis* Nyl., ♀; 13, hind femur from above, *M. puerilis* Stke., ♀; 14, do., *M. scabrinodis* Nyl., ♀.

The following table gives mean comparative indices for *M. puerilis* and similar species. These include the Frontal Index (the narrowest width between the frontal ridges $\times 100 \div$ the width of the head immediately in front of the eyes), the Frontal Laminae Index (the narrowest width between

the frontal ridges $\times 100 \div$ the width across their greatest divergence) and the Postpetiole Index (the width of the postpetiole across the middle $\times 100 \div$ the height, both measurements taken in complete side view).

Species	F.I.	F.L.I.	Pp.I.
<i>M. puerilis</i> Staercke Belgium, ♂♂	40.0	73.9	80.5
<i>M. puerilis</i> Staercke England, ♂♂	40.9	77.8	79.1
<i>M. balcanina</i> Sadil (1951), ♂♂	40.6	78.3	—
<i>M. rugulosa</i> Nyl. Sweden, ♂♂	50.8	91.9	72.2
<i>M. scabrinodis</i> Nyl. England, ♂♂	37.1	69.4	73.2
<i>M. sabuleti</i> Mein. England, ♂♂	34.3	—	69.8
<i>M. aloba</i> Forel Spain, ♀♀	41.7	82.6	68.4

To include *M. puerilis* the keys to British *Myrmica* in Collingwood (1958:81) should be emended as follows:

Males

6. Abundant long hairs on all appendage surfaces clearly exceeding their maximum width; hind tarsal hairs subequal on all surfaces; appendages blackish-brown; petiole high with dorsal surface forming a near right angle with anterior face seen in side view *M. scabrinodis* Nyl.
 — Hind tarsal hairs much shorter on underside than on extensor surface; appendage hairs not or scarcely exceeding maximum appendage width; appendages testaceous—light brown; petiole in side view low with dorsal surface forming obtuse angle with anterior face 7
7. Second funiculus segment distinctly longer than first, scape angled near base, head with sunken area dorsally in front of median ocellus *M. schencki* Em.
 — First and second funiculus segments subequal; scape simple head without dorsal pit *M. puerilis* Staercke

Queens and Workers

The second half of couplet 4 should be directed to 5a instead of to 6.

- 5a. Postpetiole distinctly higher than wide in side view; petiole with large dorsal area angled posteriorly so as to form a distinct step to its junction with postpetiole; epinotal spines as long as or longer than the space between their tips 6
 — Postpetiole low and subquadrate in side view; petiole more or less evenly sloping from dorsal crest to postpetiole in side view; epinotal spines shorter than the space between their tips *M. puerilis* Staercke

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