

## POSSIBILITIES FOR JOINT WORK OF THE MYRMECOLOGISTS OF THE BALKAN COUNTRIES

By. G. VESSELINOFF

My research on the species of ants building cone-shaped nests up to 1.5 m high, encompasses some 21,536 nests on the 110,928 square metres of Bulgarian territory. The greatest part of them belong to the *Formica* species (*F. lugubris*, *F. pratensis*, *F. rufa*), a smaller part to the genus *Coptoformica* (*C. exsecta*).

According to the number of ant nests my country may be divided into 4 regions:

1. A richly populated region which includes the Western and Central Rhodope Mountains, having about 29 nests per 100 hectares, populated mainly by *Formica lugubris* and the smaller forest ant *Coptoformica exsecta*.

2. A moderately well populated region including the Rila and Pirin Mountains with 5 nests per 100 hectares of the same two species.

3. A poorly populated region — the Balkan Mountains and the Sredna Gora Mountains — with 1 nest per 100 hectares, belonging to *Formica rufa* and *Formica pratensis*.

4. A very poorly populated region consisting of the Danubian Plain, the eastern reaches of the Balkan Mountains and the Strandja Range, with 0.6 nests per 100 hectares, belonging predominantly to *Formica rufa* and *Formica pratensis*. *Coptoformica exsecta* is lacking here.

During the last 50 years the attention of myrmecologists has been centred on the abovementioned species owing to the fact that in forests well stocked with their nests, insects harmful to the trees cannot multiply to a degree dangerous to their growth. Therefore the aim of myrmecologists has been to increase the number of their nests in poorly populated regions as a means in the biological struggle against harmful insects.

Professor Pavan and his collaborators transplanted ants of the *Formica lugubris* genus (which is also found in the Balkan Peninsula) from the Alpine forests to the Appenines. The results of that successful undertaking were repor-

ted at the Congress which took place from Aug. 28 to Sept. 2 at Varenna, Italy. The same genus of ants, which were not found in Canada, were transplanted there about 20 years ago and are developing normally, as reported by the initiator of that undertaking Professor Finegan. Excellent results have also been achieved by Professor Gösswald in the FRG with *Formica polyctena* (not found in Bulgaria) — up till now 35,000 new nests have been founded in evergreen and oak forests.

Successful transplantations of *Formica lugubris* have been achieved in Bulgarian evergreen and oak forests in the Sredna Gora Mountains not far from the town of Koprivshitsa.

I believe that the myrmecologists of the Balkan countries can co-operate with one another in studying, multiplying and transplanting forest ants with a view to the biological struggle, as suggested during the discussion at the Meeting of the Work Group *Formica rufa* (Varena, Como, Aug. 28-Sept. 2, 1978). This co-operation may take the form of:

1. Research in the ant species in neighbouring countries, of interest to the common aim.

2. Establishing the number of ant nests of the species most effective in the biological struggle, viz. *Formica lugubris* and to some extent *Formica rufa*, in each region and supplying them with protective wire net covers.

3. Mastering the techniques of artificial multiplication of *Formica lugubris*.

4. Attempts to transplant *Formica polyctena* which is extremely effective in Central Europe. The chances of success are good as the ecological conditions in Aegean Thrace — altitude above sea level, air humidity — are very similar to those in Central Europe where the species is indigent and has been artificially multiplied as a weapon in the biological struggle against harmful insects in evergreen and oak forests.

*Geo Milev Str. 19 b*  
*Sofia 1111, Bulgaria*