



Eva Crane Trust

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TITLE: Bumble Bee Distribution Maps Scheme: the first maps

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BUMBLE BEE DISTRIBUTION MAPS SCHEME: THE FIRST MAPS

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The Bumble Bee Distribution Maps Scheme (B.D.M.S.) has been organized by the Bee Research Association since 1970, as one of a number of recording schemes operating within the scope of the European Invertebrate Survey. The aim of B.D.M.S. is to produce a series of maps that will show the distribution of each species of bumble bee throughout England, Ireland, Scotland and Wales. Records for two date-classes—pre-1960 and 1960 onwards—are being collated on a 10-km square basis (using the National Grid and the Irish National Grid systems), along the lines of the various other recording schemes at present in operation. Data from present-day collecting and observation, as well as information from museum and private collections and reliable literature sources, are all being integrated into B.D.M.S. For field work, the Scheme relies on Collectors (who submit all specimens caught to Dr. D. V. Alford for identification), and Recorders (who can themselves identify most of the specimens they find). Dr. Alford is in charge of the collation and analysis of records obtained through the Scheme. The report below includes the first provisional maps; a "Progress Report for 1970" was published in *Bee World* 52(2) : 55-56 (1971).

The Natural Environment Research Council has awarded a grant towards the cost of the Bumble Bee Distribution Maps Scheme. This will help to provide essential services for the Scheme until 1974, in support of the voluntary field work. The opportunity is taken here to express our very sincere thanks to Dr. Alford for his authoritative and exacting work, without which the Scheme would not be in operation.

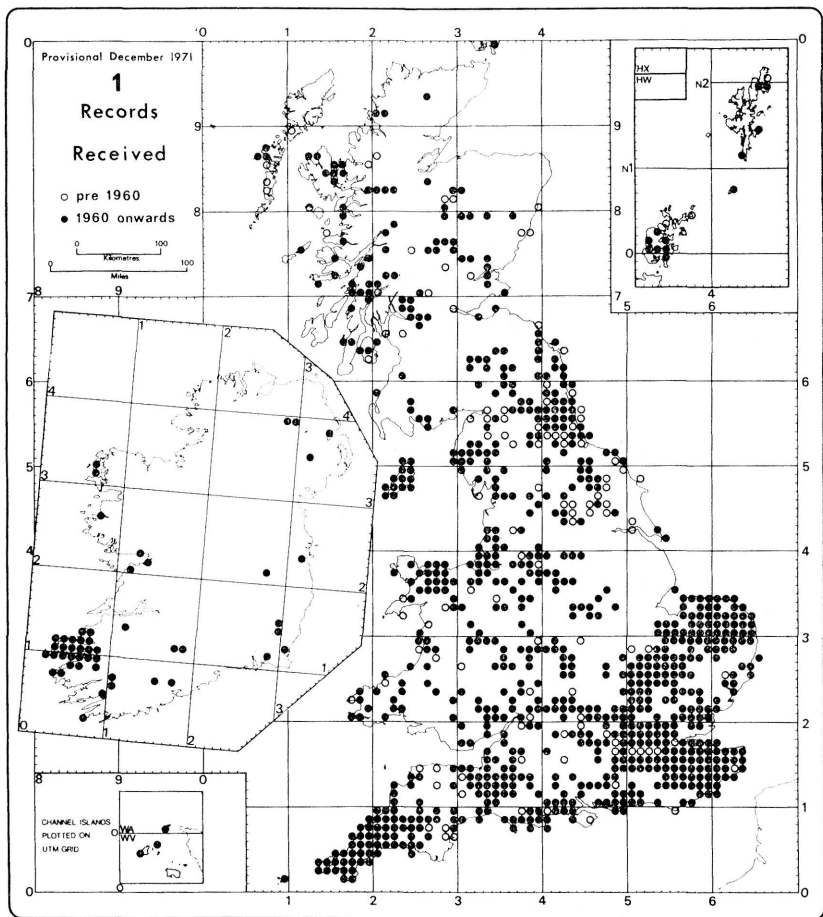
Progress report 1970-1971

by D. V. ALFORD

Ministry of Agriculture, Fisheries and Food, Cambridge

By the end of 1971 records or specimens had been received of bumble bees from 964 of the 3600 10-km squares covering Great Britain and Ireland; these are shown in the "Situation Map" (Map 1). More information is still required from these squares; for many of them only one species has so far been recorded, and for some, records refer only to the pre-1960 period, so up-to-date details are needed. The areas from which *no* information has so far been received show up clearly on the Situation Map. Some of the "blank" areas in Scotland, Ireland and much of Wales are not unexpected, but there are some rather surprising gaps. Details from Devonshire, Hampshire and Suffolk, for example, lag behind those from adjacent counties. This position may well improve during 1972.

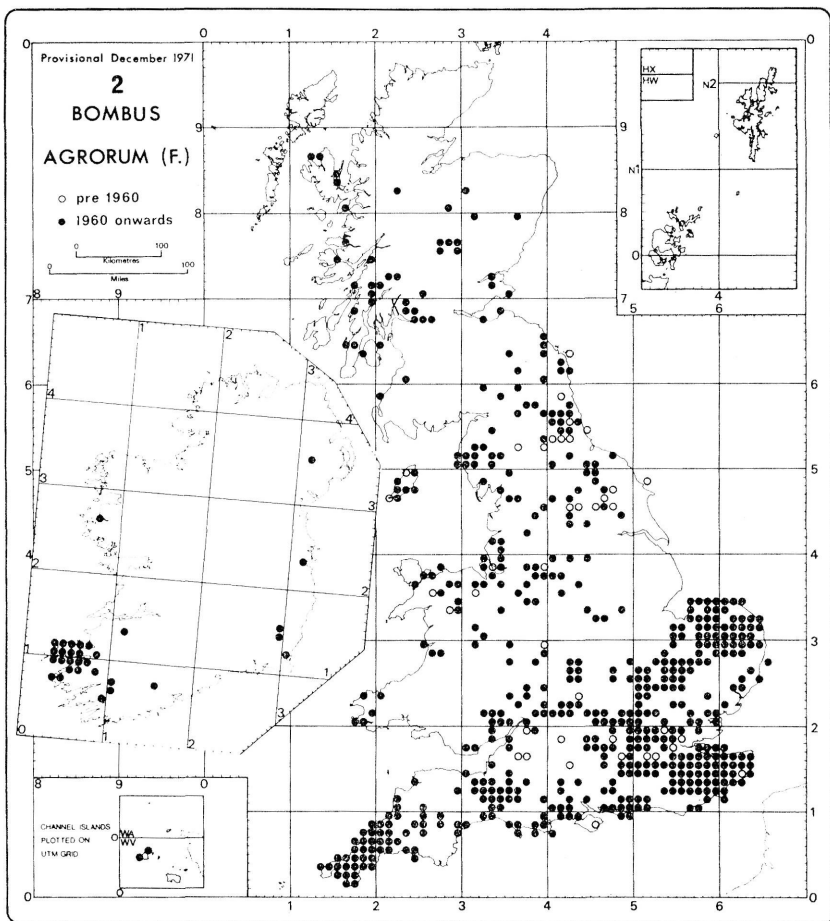
Information obtained during 1970 and 1971 shows that only 7 of the 19 "British" species of bumble bees are generally common throughout Britain: *B. agrorum*, *B. hortorum*, *B. lapidarius*, *B. lucorum*, *B. pratorum*, *B. ruderarius*, *B. terrestris*. Provisional distribution maps for two of these species have now been prepared: *B. agrorum* (Map 2) and *B. lucorum* (Map 3). Some of our other *Bombus* species are much more restricted in their distribution (e.g. *B.*



Map 1. Situation map showing the 10-km squares in Britain and Ireland from which bumble bees have been recorded up to 1971.

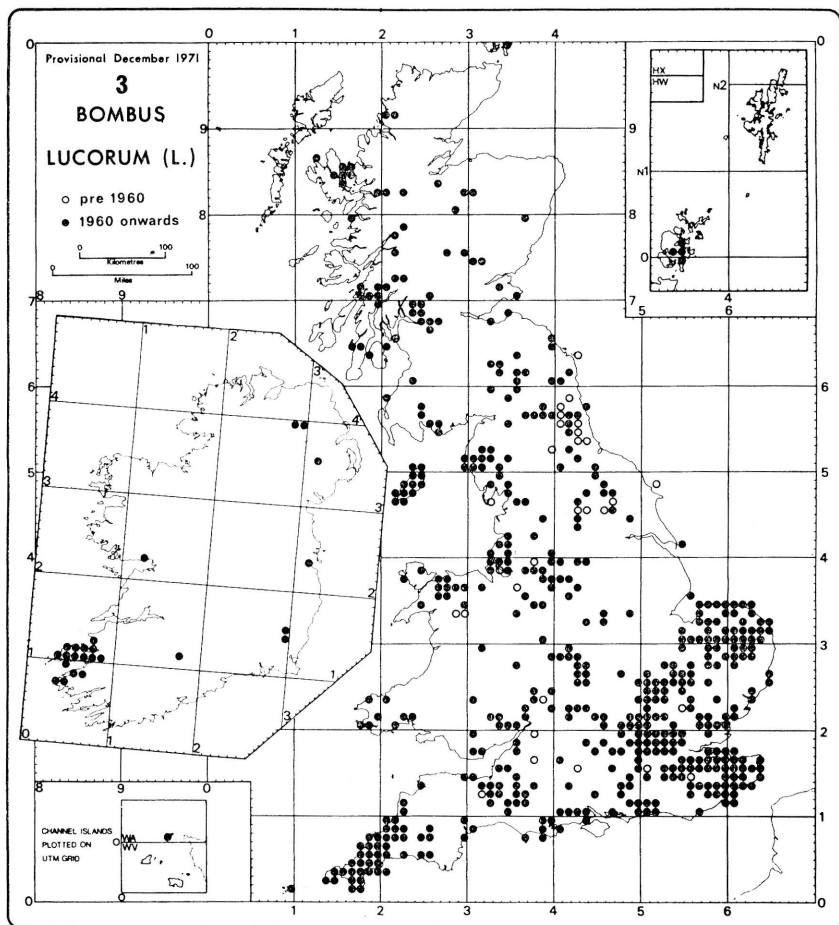
jonellus to heaths, *B. lapponicus* to mountains and moorland, *B. distinguendus* to northern areas). The rest are relatively uncommon or extremely rare. Among them are *B. ruderatus*, *B. sylvarum* and *B. humilis*, which are evidently far less common now than might be supposed from an examination of older literature. All 6 British species of *Psithyrus* “cuckoo bees” were recorded in both 1970 and 1971, although *P. rupestris* appears to be particularly uncommon at the present time.

Correct identification of the various species of bumble bee requires a certain—and often considerable—degree of experience. Reference to the structure is



Map 2. Map showing the 10-km squares in Britain and Ireland from which *Bombus agrorum* was recorded up to 1971.

usually essential, and reliance on the (inconsistent) coat colour patterns can in many cases lead to false identifications. A key to the species of the *Bombus* and *Psithyrus* found in Britain and Ireland has therefore been prepared, with black and white illustrations; this is being published in a series of short papers which will finally be reprinted as a whole. It will help B.D.M.S. Recorders to determine specimens. Nevertheless, it is frequently far better and easier for observers to send specimens to us for examination. This is particularly true for participants with little experience of examining bees, or with limited facilities for doing so. Valuable help has been provided by our Collectors



Map 3. Map showing the 10-km squares in Britain and Ireland from which *Bombus lucorum* was recorded up to 1971.

over the last two seasons in this way. There need be no fear that the relatively small number of bees collected will have adverse effects on the subsequent populations of the species concerned.

Copies of this Report (M63, BDMS/10), and other information about B.D.M.S., are available from Dr. Eva Crane, Bee Research Association, Hill House, Chalfont St. Peter, Gerrards Cross, Bucks. SL9 0NR. Anyone interested in taking part is urged to write for details.