

A planthopper family overlooked until recently on the Canary Islands: Kinnaridae Muir (Homoptera, Auchenorrhyncha, Fulgoromorpha).

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ABSTRACT: Remarks on distribution, ecology and relationships of two recently described endemic species of Kinnaridae (representing two endemic genera, *Kinnacana* Rem. and *Kinnoccia* Rem.) from the Canary Islands.

Key words: Homoptera, Auchenorrhyncha, Fulgoromorpha, Kinnaridae, Canary Islands.

RESUMEN: En el presente trabajo se proporcionan datos sobre la distribución, ecología y parentesco entre dos especies endémicas de Kinnaridae (que representan a dos géneros endémicos, *Kinnacana* Rem. y *Kinnoccia* Rem.) recientemente descritas de las Islas Canarias.

Palabras clave: Homoptera, Auchenorrhyncha, Fulgoromorpha, Kinnaridae, Islas Canarias.

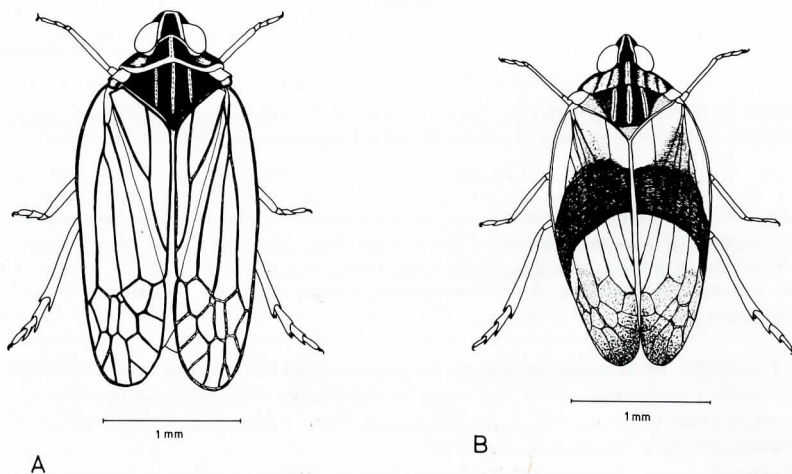
Already long ago had been noted the presence of a special set of taxa (flora as well as fauna) on the Canary Islands (similarly on Madeira and -to some extent- the Azores and Cape Verde Islands) differing considerably from those of adjacent continental regions (SW-Europe, NW-Africa). This led to a long history of research, which resulted in a fairly complete knowledge of the set of plant and animal species inhabiting these islands, which for many groups became more thoroughly explored than the adjacent continental regions. Even groups of small, inconspicuous insects like the leaf- and planthoppers (Homoptera Auchenorrhyncha) seemed to be well known, (e.g. LINDBERG, 1954). But research activities of recent years produced another increase in knowledge about this group of insects: on the one hand examinations under the aspects of evolutionary theories revealed the existence of a higher extent of evolutionary differentiation into "insular taxa" in some groups (REMANE, 1985a) as well as a remarkably high extent of differentiation by what might be called "adaptative radiation" in at least one group (REMANE, 1984). On the other hand several taxa just had been overlooked -amongst them taxa which definitely were not "newcomers" colonizing man-made biotopes, but old, endemic inhabitants of these islands.

One of the most unexpected of these discoveries was that of two taxa belonging to the fulgoromorphan family Kinnaridae on Gran Canaria and the western islands, i.e. on those of purely oceanic origin and sufficiently elevated to enable high ecological diversity on them.

Members of what is called Kinnaridae now were until recently known from two rather distant areas: One of them in the Oriental Region (reaching to Formosa and the Philippines in the east, to Iran and Southern Russia in the north, and to the island group Réunion-Mauritius

and to Southern Arabia in the west, see EMELYANOV, 1984, LINNAVUORI, 1973 and SYNAVE, 1958); the other one in the New World (southern United States far into South America, apparently with a high number of taxa in the Caribbean area, see e.g. FENNAH, 1945a and 1980, RAMOS, 1957). The discovery of Kinnaridae on the Canary Islands to a certain extent closes the gap between the two formerly known areas of distribution of members of this family.

Both taxa of Canarian Kinnaridae apparently were new to science. They could not even be placed into one of the genera already existing. Besides that they were so different from each other in shape and coloration that it was thought to be best to erect two new genera for them: *Kinnacana* Rem. with *K. clara* Rem. (type species) (see fig. A) and *Kinnoccia* Rem. with *K. chromata* Rem. (type species) (see fig. B) (REMANE, 1985b). Both taxa are rather small in size (about 3 mm long) and behave inconspicuously (probably that is why they had been overlooked for so long).



Ecologically they are to be found not in the Laurel forest (where the oldest set of species with relictary distribution seems to have survived the changes brought about by the ice ages on the continent), but in more xerophytic types of vegetation from coastal regions up into the pinar. *Kinnacana clara* Rem. was mainly found on members of the plant family Labiatae (*Bystropogon*, *Lavandula*, *Micromeria*), *Kinnoccia chromata* Rem. additionally on Compositae (*Argyranthemum*, *Schizogyne*). In spite of the wide distribution of their foodplants they were found only locally (but then often in considerably high number): this might be due to their apparently subterranean larval development, which probably requires special soil conditions. (The larval stages of both taxa remain to be discovered and described!). Each taxon has so far been found on more than one of the Canarian Islands: *Kinnacana clara* Rem. on Gran Canaria, Tenerife (type locality: supra Chio), and La Palma; *Kinnoccia chromata* Rem. from La Gomera, El Hierro y La Palma (type locality: north of Puerto de Naos). On La Palma both taxa were found at the same time at the same place on the same plants – a fact supporting the idea of a relatively early age of their phylogenetic separation.

Doubtless these Canarian Kinnaridae belong to a stock of relatively old inhabitants. Unfortunately it is not possible now to decide, where their next relatives are to be found. This is due to the fact that a phylogenetic analysis of the Kinnaridae has not yet been undertaken, so at the moment it is neither clear whether Kinnaridae as a whole are a monophyletic unit, not what monophyletic units exist within Kinnaridae and how they are related to each other. (Externally the Canarian taxa are more similar to some of the New World- but wheter similarity is identical with relationships in this case has to be shown by future research). As a clear idea about phylogenetic relationships within a group is the inevitable base for establishing geographical relations, all ideas about current distribution of Kinnaridae and attempts of its historical explanation would be no more than premature speculation: we have to wait until a

founded phylogenetic analysis is published.

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