The planthopper fauna of the province of Florina: An example of species richness in Greece

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During the last five years, the authors have carried out extensive investigations on the Hemipterofauna of Greece and adjacent regions. Among other reports, we have recently reported our final results on the family Delphacidae, which includes, so far, 112 species from various localities in Greece (Drosopoulos, Asche & Hoch, in press).

Although several localities in Greece were very rich in numbers of species (e.g. Rhodopi) Mountain Range, Mount Vourinos, the Province of Phocis, Mount Olympus and surroundings), it was remarkable to find almost half of the total number of species occurring in Greece in the north-western part of the Province of Florina alone, especially in the area between the lakes Micri Prespa and Megali Prespa, on Mount Kalo-Nero and in the Ladopotamos valley (Table 1). This number even equals the total number of species reported from some other Balkan countries (e.g. Bulgaria, Turkey) (Asche, 1982 a.b; Drosopoulos, 1983).

Zoogeographic analysis of the planthopper fauna of this area suggests that it is very similar to those of the European and Eurosiberian regions (Table 2). Indeed, more than half of the species (53%) have an Eurosiberian or an European distribution, while a considerable number of species (25%) have either a Pontomediterranean or an Euromediterranean or an Eurosiberian - Mediterranean distribution. Taking into account also the four endemic and the two Holarctic species, which have been found mainly in the northern part of Greece and in some high elevations of central Greece, there remains only a small part of the delphacid fauna which, according to their present distribution, belongs to the Mediterranean (11.3%). However, the only species strictly characterized as Mediterranean - Ethiopian is *Sogatella vibix*. Low population densities of this species penetrate the continental part of Greece, while it is rather common in the southern part of Greece. It should be mentioned here that two endemic species of Greece, *Ribautodelphax c.f. collinus* and *Delphacodes sp.*, are recorded only from this area. Also, another eight species — *Kelisia vittipennis, Eurysa brunnea, Eurybregma nigrolineata, Stiroma affinis, Paraliburnia adela, Euides speciosa* and *Acanthodelphax denticauda* — occur, within Greece, in this area only and some of them are reported from the Balkan peninsula for the first time (Drosopoulos, 1983). Another common species of the planthopper fauna of Greece, which surely occurs in this area is *Ditropis pteridis*, since its food plant *Pteridium aquilinum* is very common there.

The above data show that the delphacid fauna in the Province of Florina is in conformity with the climatological conditions that occur there (cold winters and high precipitation). In addition, this area serves as a refuge for the most southernly populations of some species, which ecophysiologically (phenology, diapause) behave in a similar manner to those populations that occur under central or even northern European conditions.

The large number of species occurring in a relatively small area, on the other hand, is a strong indication of the quality of its biotopes, which are well known for their rich avian fauna as well. Conclusively, special care should be taken for the natural conservation of this unique area of Greece.

Table 1. List of species occurring in the Province of Florina.

1. *Asiraca clavicornis* (Fabricius, 1794)	Eurosib. - Medit.
2. *Stenocranus minutus* (Fabricius, 1787)	Euromedit.
3. *Jassidaeus lugubris* (Signoret, 1865)	European
4. *Kelisia brucki* Fieber, 1878	Pontomedit.
5. *K. yarkonensis* Linnavuori, 1962	E. Medit.
6. *K. confusa* Linnavuori, 1957	Euromedit.
7. *K. guttulifera* (Kirschbaum, 1868)	European
8. *K. praecox* Haupt, 1935	Eurosib.
9. *K. vittipennis* (J. Sahlberg, 1868)	Eurosib.
10. *K. ribauti* Wagner, 1939	Eurosib. - ? Medit.
11. *Anakelisia perspicillata* (Boheman, 1845)	Eurosib.
12. *Delphax ribautianus* Asche & Drosopoulos, 1982	Medit.
13. *Chloriona flaveola* Lindberg, 1948	Holomedit.
14. *C. unicolor* (Herrich - Schaffer, 1835)	Euromedit.
15. *Eurysa brunnea* Melichar, 1896	European
16. *E. lineata* (Perris, 1857)	Euromedit.
17. *Eurybregma bielawskii* Nast, 1977	Pontomedit.
18. *E. nigrolineata* Scott, 1875	Eurosib.
19. *Euconomelus lepidus* (Boheman, 1847)	Eurosib.
20. *Stiroma bicarinata* (Herrich - Schaffer, 1835)	Eurosib.
21. *S. affinis* Fieber, 1866	Eurosib.
22. *Metropis mayri* Fieber, 1866	European
23. *Conomelus odryssius* Dlabola, 1965	Pontomedit.
24. *C. sagittifer* Remane & Asche 1979	C. Medit.
25. *Delphacodes capnodes* (Scott, 1870)	European
26. *Laodelphax striatellus* (Fallen, 1826)	Holarctic Orien. Reg
27. *Sogatella vibix* (Haupt, 1927)	SE Medit. Ethiop.
28. *Hyledelphay elegantulus* (Boheman, 1847)	Eurosib.
29. *Paraliburnia adela* (Flor, 1861)	Eurosib.
30. *Megamelodes quadrimaculatus* (Signoret, 1865)	European
31. *Calligypona reyi* (Fieber, 1866)	Eurosib.
32. *Euides speciosa* (Boheman, 1847)	Eurosib.
33. *Muellerianella brevipennis* (Boheman, 1847)	Eurosib.
34. *M. fairmairei* (Perris, 1857)	European
35. *Florodelphax leptosoma* (Flor, 1861)	Eurosib. - Medit.
36. *Muirodelphax aubei* (Perris, 1857)	Eurosib. - Medit.
37. *Acanthodelphax denticauda* (Boheman, 1847)	European
38. *Dicranotropis beckeri* Fieber, 1866	Pontomedit.
39. *D. hamata* (Boheman, 1847)	Eurosib.
40. *Xanthodelphax hellas* Asche, 1982	Endemic
41. *X. flaveolus* (Flor, 1861)	Eurosib.
42. *Toya propinqua* (Fieber, 1866)	Holarctic
43. *Javesella dubia* (Kirschbaum, 1868)	Euromedit.
44. *J. forcipata* (Boheman, 1847)	Eurosib.
45. *J. obscurella* (Boheman, 1847)	? Eurosib. - Nearctic
46. *J. pellucida* (Fabricius, 1794)	Eurosib.
47. *Ribautodelphax albostriatus* (Fieber, 1866)	Eurosib.
48. *R. c.f. collinus* (Boheman, 1847)	Endemic
49. *R. collinus* (Boheman, 1847)	Eurosib.
50. *R. falacron* Drosopoulos, Asche & Hoch, i.p.	Endemic
51. *R. pungens* (Ribaut, 1935)	European
52. *Flastena fumipennis* (Fieber, 1866)	Medit.
53. *Delphacodes sp.*	? Endemic
54. ? *Ditropis pteridis* (Spinola, 1839)	European

Table 2. Zoogeographic analysis of the delphacid fauna of the Province of Florina.

Number of species (%)			*Distribution*
19	(36.0)	(53.0)	Eurosiberian
9	(17.0)		European
4	(7.5)		Pontomediterranean
4	(7.5)		Eurosiberian - mediterranean
5	(9.4)		Euromediterranean
4	(7.5)		Endemic
2	(3.8)		Holarctic
6	(11.3)		Mediterranean

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Round table on nature conservation in Greece as indicated by Rhynchota

A summary written by S. DROSOPOULOS

Mr. G. Katsadorakis, focussing on the problems concerning the management of the National Park of Prespa, said the following:

The problems of the Park are not a few. Some of them are common to those of other "protected" areas in Greece. Most of these problems could - but have not yet - find a solution, if there was a real concern of the Greek state for the protection of nature.

I mention below these problems which I consider the most important :

a. There is no legislation for the National Parks yet.
b. There is no special service for our National Parks and thus no personel to work in them and for them. Up to now this task was undertaken by the Forest Service which doesn't suffice for this too. As a concequence, there is illegal hunting, tree cutting, grazing illegal disturbance to the bird colonies, e.t.c.
c. The already existing regulations are not properly fitted to the specific problems of the area, so the local people have a bad disposition against the National Park (of course it isn't always easy to make them have a good one).
d. Additionally there is no educational program for the local people to be informed about what, how and why, in a National Park.
e. There is no satisfactory elementary knowledge and no finances for research. So a lot of questions remain unanswered: