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A new organisation to study and protect insects : the G.N.E.R.C.I.M.

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Summary

In February 1988, the 'Office Pour l'Information Eco-entomologique' (O.P.I.E.) set up a new organisation, the G.N.E.R.C.I.M., the objective of which is to contribute to the protection of habitats and species by promoting field studies leading to ecological management of endangered habitats, and to publish papers on this subject. The organisation is recognised by the French Ministry of the Environment and is composed of amateurs and professional scientists.

Résumé

L'Office Pour l'Information Eco-Entomologique (O.P.I.E.) a créé en février 1988 un groupe d'étude reconnu par le Ministère français de l'Environnement : le G.N.E.R.C.I.M. Il est composé de scientifiques amateurs et professionnels et ses objectifs sont de contribuer à la protection des milieux et des espèces en promouvant des études de terrain pouvant conduire à la gestion écologique d'habitats menacés, de diffuser la documentation à ces travaux.

Introduction

For decades the protection of our zoological heritage was applied only to some vertebrates such as birds, mammals, and mainly to "animaux de la chasse". Invertebrates were seriously taken into account only recently, for fifteen years at the most, and it crystallized in the passing of French national laws such as the decree of 3rd August 1979 covering thirty three species and subspecies. Some international conventions were ratified such as Berne (1981), Ramsar (1971,1975) and Bonn (1979).

Entomologists are frustrated by the ever increasing legislation against their activities at the same time as habitats are relentlessly being destroyed or becoming depopulated.

For twenty years the Office Pour l'Information Eco-Entomologique (O.P.I.E.) has tried to actively participate in the protection of entomological fauna

(GUILBOT & LHONORE, 1990). Their first programme was to breed and reintroduce *Carabus olympiae*. Endangered by a ski resort in a Piedmontan valley, where it was endemic, the species has now been saved from extinction. This experience was the starting point of scientific work and publications on the biology of carabids (MALAUSA, 1975 ; 1977 ; 1978 ; MALAUSA, *et al.*, 1983 ; 1987). We must remark that these insects are mainly collected by amateurs who rarely publish scientific works on their biology or ecology !

Structure and Functions

In 1988 O.P.I.E created a new organisation which has the opportunity to become a true National Council. The initial idea was to create a body proposing protection measures based on research activities. At a time when molecular biology has priority, French “professional” entomologists have become aware that the amount of field work undertaken is decreasing due to lack of time, material or financial possibilities (difficulties in obtaining absence authorisations, personnel investments becoming more and more critical, etc.). Ecological and faunistic publications published in scientific journals are considered as secondary, but not in international ones ! The new legislation is not inductive to research on endangered species ; such research is rarely recognised and is never rated highly by French scientific authorities (C.N.R.S., C.N.U.). Only a few passionate entomologists try to maintain their level of activity. Amateurs may often invest more time and more money, but often lack information and have difficulty in discriminating priorities. Their participation in insect protection projects is now reduced in France. Two examples :

- the mapping of French insects is not yet complete and is the result of the participation of a minority of amateurs, not professionals.
- the Z.N.I.E.E.F. (Zones Naturelles d’Intérêt Écologique Faunistique et Floristique) inquiries have exceptionally taken insects into account, the results always coming from the same, few, good volunteers !

A collaboration between amateurs and professionals could be constructive. Taking this situation into account, O.P.I.E. decided in February 1988, to create an autonomous group of specialists forming a coordinated body, not governmental, managed by O.P.I.E. The G.N.E.R.C.I.M (Groupe National d’Études et de Recherches Concernant les Insectes et leurs Milieux) comprises fifteen persons of various backgrounds : amateurs of regional groups of O.P.I.E. or other societies (French Entomological Society, etc). professionals of Universities or the National Museum of Paris, ecologists, taxonomists, geneticists, etc.

1. Objectives

* to provoke public opinion on conservation measures of insects against social and economical pressures. Information aimed at the public is necessary (pamphlets on insects, educational documents, television, etc). This is very

important in France at this moment, as the fundamentals of natural history are no longer taught in grammar schools.

- * to promote field studies associating amateurs and professionals ; these may result in the practical management of habitats and populations.

- * to bring together French data banks via the French Fauna and Flora Secretary (S.F.F.) and help progress on cartographical studies, with the aim of establishing a 'balance-sheet' of French entomological fauna.

- * to contribute to the protection of habitats by initiating and supporting new methods of management of our natural heritage.

- * to be the official interlocutor responsible for discussing with large organisations such as Regional Delegations of management and Environment (D.R.A.E.). In this respect the G.N.E.R.C.I.M. already functions as a consultant to the Nature Protection Delegation (D.P.N.) and the I.U.C.N.

- * to propose an ethical code for French entomologists.

2. Projects under way

For two years G.N.E.R.C.I.M has been carrying out certain projects, often supported by the French Ministry of Environment. It will publish, possibly in coordination with this Ministry, summary publications on the results achieved. We are already working with the D.P.N. (Délégation à la Protection de la Nature) on the realisation of a National Insects Observatory. Endangered species such as those of the Berne Convention, will have priority research. Among the work undertaken we can mention :

- * in collaboration with regional D.R.A.E. (Délégation Régionale à l'Environnement), at the request of the Ministry, the collation of regional lists of species and habitats in need of protection in Provence-Cote d'Azur, Charentes-Poitou and Ile-de-France. Concerning the latter, the work was undertaken jointly to develop the methodology of field work ; results will be published soon. The formation of such regional lists is exceptionally important and could not have been co-ordinated at national level, especially taking into account the geographical distribution of insects. We must remember that in France no habitat can be protected if it does not have any protected species of the national list.

- * an ontogenetic work of French *Parnassius* populations, directed by Prof. DESCIMON ; this work was the subject of a theses on populations of *P. mnemosyne* in the south of France (NAPOLITANO, 1989) and has now been extended to other populations of *P. apollo* and *P. mnemosyne*. Without revealing the unpublished results already obtained, it is clear that polymorphism of populations may allow successive colonisation of our mountains ; this has resulted in the premature description of subspecies based on doubtful morphological criteria. Moreover, Prof. DESCIMON's staff have worked out precise ecological requirements of some isolated populations ; this work could help to realise methods of habitat management.

* another project, led by amateurs of the PACA (Provence-Alpes-Cote d'Azur) region, coordinated by M. CHAULIAC, is on populations of *Gegenes pumilio*. The end result could be the reintroduction of that species in some habitats recently destroyed by burning.

* for fifteen departments of western France the author coordinates a study on the population dynamics of three lycaenids (*Thersamolycaena dispar*, *Maculinea alcon*, *M. teleius*) and one Satyridae (*Coenonympha oedippus*). We are establishing the precise distribution of these species, from Normandy to Landes (especially in Regional Parks); the genetic diversity is important in these populations. A study of the ecological requirements of these species will allow the correct management of the habitats.

* one study on populations of *Graellsia isabellae* began this spring; it involves the cartography of the subspecies and synthesis of the female pheromone. One of the objectives is to determine the influence of some varieties and clones of pine trees on the biology of *isabellae*. Two laboratories of I.N.R.A. are collaborating with this project; there are indications that some clones of *Pinus sylvestris* are more acceptable to caterpillars than others (AUGER, GERI & HAVERLANT, 1990). Restocking with such varieties is possible.

* as for future projects, G.N.E.R.C.I.M plans some studies on populations of other invertebrates (not only insects) listed by the Berne Convention. For *Hypodryas maturna* and *Eurodryas aurinia* the work began this spring (1990) with R. ESSAYAN and C. DUTREIX. One of the objectives is to map, in collaboration with the S.F.F., the distribution of these species and to estimate the strength of populations.

Conclusions

G.N.E.R.C.I.M is a unique group because of :

- its organisation, its diversity and the voluntary nature of its amateur and professional collaborators.
- its financial possibilities, its skill at following lines of research not predetermined by the cellars of universities.
- its objectives which aim at the protection of species and habitats but also the diffusion of knowledge.

In conclusion we should note that the objectives and projects of the G.N.E.R.C.I.M agree with :

- the resolutions adopted at the Wageningen Congress in April 1989 on "The future of Butterflies in Europe : Strategies for survival".
- the European Project for the Conservation of Endangered Butterflies proposed by M. Meyer.
- the ten Theses referring to the Protection of Butterflies and their Biotopes proposed by Dr. S. Wagener.

G.N.E.R.C.I.M constitutes the French official body in this field and wishes to become involved with other countries of the European Community, through projects and cooperation initiatives with institutes and laboratories of different States concerned with such problems of invertebrate conservation.

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