

France has a rich bryoflora, with an estimated 1,200 species (around 900 mosses and about 300 liverworts). However, the geographical distribution of bryophytes is poorly understood for mainland France. Bryophytes represent an important element of biodiversity, yet they are repeatedly ignored in floristic inventories and measures of conservation.

In comparison to its European partners, France lags behind in its efforts to inventory and map its bryological diversity, preventing it from achieving the commitment made for the European plants strategy programme (e.g. *Natura 2000*).

To achieve the required goals there are three main areas on which we need to focus.

**1. We require an increase in the number of published studies on bryophyte taxonomy and ecology.** Presently, no up-to-date checklist or atlas of species exists for the country, the only available distribution maps being the work of individual bryologists or small groups, and these are generally restricted to a few species (Sapaly, 1997, 1999; Sapaly & De Zuttere, 1999, 2000; Aicardi *et al.*, 1998). In addition, no recent flora has been published since Augier (1966), and we lack a published list of endangered species in France.

**2. Enhanced co-ordination between local bryologists is essential.** Currently, France does not have any active bryological association, despite an attempt to create one in early 2000. Local actions (regional checklists and red lists) are mostly the work of individuals, and this lack of co-ordination leads to heterogeneous field data.

**3. The number of active bryologists, amateur and professional, must be increased** with the aim of promoting bryological research

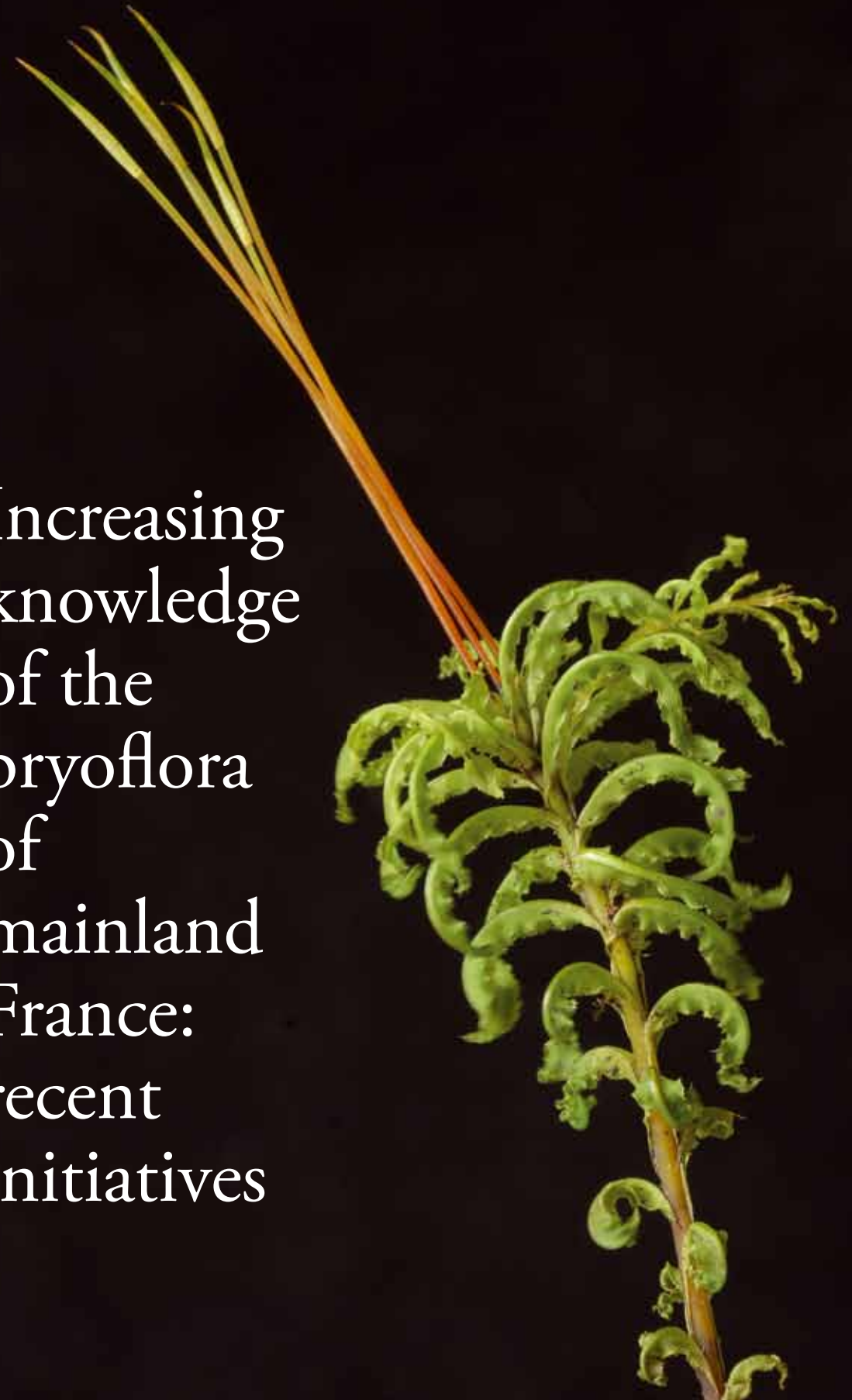
British bryologists may have cause to be concerned about the status of bryology and bryophytes in the UK and Ireland. But a quick trip across the Channel will make us realize just how lucky we really are. The plight of bryology in France is cause for great concern, not just for the French, but for all of us in Europe. However, it is hoped that a series of new initiatives, described here by **Sébastien Leblond, Vincent Hugonnot & Jacques Bardat**, will help to rescue French bryology.

and field bryology. The development of an academic research programme in systematics and ecology is urgently needed, as well as the creation of co-ordinated field and taxonomic courses.

A strategy to further increase knowledge on French bryophytes is under discussion between various institutions (National Museum of Natural History, Federation of National Botanical Conservatories, etc.) and Naturalist Associations (Tela-Botanica, etc.). With the support of the Ministry of Ecology, they aim to provide concrete solutions to overcome the current lack of knowledge of species distribution. Presently, an annotated checklist with distribution data is being prepared. The objectives of this project are:

▷ A familiar sight for bryologists on both sides of the channel: *Plagiomnium undulatum*. J. Bardat

# Increasing knowledge of the bryoflora of mainland France: recent initiatives





- Augier J. (1966). *Flore des Bryophytes*. Paris: Lechevalier
- Sapaly, J. (1997). Cartes provisoires de répartition des bryophytes en France. *Nowellia Bryologica* 12–13, 3–9.
- Sapaly, J. (1999). Cartes provisoires de répartition des bryophytes en France. *Nowellia Bryologica* 15–16, 52–62.
- Sapaly, J. & De Zuttere, P. (1999). Cartes provisoires de répartition des bryophytes en France. *Nowellia Bryologica* 17, 34–50.
- Sapaly, J. & De Zuttere, P. (2000). Cartes provisoires de répartition des bryophytes en France. *Nowellia Bryologica* 18, 20–45.
- See also Sam Bosanquet's review of the recently published flora *Mousses et Hépatiques de Païolive* in this issue, p. 56.

△ Pierre Boudier in the field. J. Bardat

▷ Top right. *Dicranum viride*. ▷ Lower right. *Lophozia obtusa*. J. Bardat

- ▷ to list all the species of bryophytes currently known in mainland France;
- ▷ to establish the geographical distribution of the various species throughout France, with the construction of distribution maps (in the form of an atlas), allowing us to define areas of high conservation value, which can then be taken into account for conservation planning;
- ▷ to assess the status and trends in the distribution of bryophytes (are species at risk of extinction or are their ranges expanding?) as well as the threats to these plants, with the writing up of a national IUCN Red Data list.

To carry out this inventory project, it will be necessary to integrate all data on French bryophytes within a single system. This will include: (1) recent inventories produced by professional and amateur bryologists; (2) herbarium specimen data from museums and other institutions; and (3) bibliographical data. All data collected by the project will be freely available to the entire community. Currently, national distribution maps are available online on the National Inventory of Natural Heritage website (<http://inpn.mnhn.fr>),

and regional distribution maps on the websites of the respective National Botanical Conservatories ([www.conservatoiresbotaniquesnationaux.com](http://www.conservatoiresbotaniquesnationaux.com)).

To conduct this project, different resources are being developed, including:

- ▷ an updated taxonomic and nomenclatural index of French bryophytes, based on the work of C. Lemonnier ([www.tela-botanica.org/page:bryophytes\\_europe](http://www.tela-botanica.org/page:bryophytes_europe));
- ▷ a standard data format which allows the sharing of data between different National Botanical Conservatories;
- ▷ identification of any possible information resources (bryologists, herbarium collections) both nationally and internationally.

A simple web-based questionnaire has been developed which aims at collecting basic information concerning institutions and their distribution data for French bryophytes. The aim of this questionnaire is to promote collaboration among local and foreign bryologists (<http://spreadsheets.google.com/viewform?formkey=dFh4aTdQQVJPY1E5Z1k0anNMTEh6dEE6MA>).

Anyone who wishes to participate in this collective atlas, and can provide information on the distribution of bryophytes in mainland France (observations and/or collection of data) is welcome to contribute.

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#### References

- Aicardi, O., Boudier, P., De Zuttere, P., Fesolovicz, P., Gérard, M., Hébrard, J.P., Plat, P., Pohl, H., Pierrot, R.B., Rogeon, M.A., Skrzypczak, R., Sotiaux, A., Schumacker, R., Vadam, J.C., Wätze, J.R. & Werner, J. (1998). Cartes provisoires de répartition des bryophytes en France. *Nowellia Bryologica* 14, 25–35.

