

FOREWORD

1997. The choice of 1997 for the **First Regional Conference on *Miconia calvenscens* Control** was, in part, to recognize the 60th anniversary of the (unfortunate) introduction of this alien species as an ornamental plant to the Harrison Smith Botanical Garden, Tahiti, in 1937. It rapidly became a "plant pest" both in French Polynesia and Hawai'i, and is becoming one of the most widely known example of the destructive impact of a biological invasion into an insular ecosystem. There was an impending need to synthesize what we knew about its biology and control. The main focus of the conference, therefore, was to assess several years of study and management of *M.c.* in the Pacific region, particularly French Polynesia and Hawai'i, and reevaluate what needs to be done. It also provided an opportunity for government administrators, managers and researchers to get together and exchange ideas and concerns informally.

Control operations, initiated in 1990 on the island of Raiatea (Society Islands) and 1991 on the island of Maui (Hawai'i), have increased dramatically each succeeding year. For example, the French Army took part in the removal campaigns in 1993 and 1997 in French Polynesia. Action committees were set up against *M.c.* and other plant species of the Melastome family on Maui in 1991 and on Hawai'i in 1995. In Hawai'i, every level of government, from the Governor's office down to the County government, are supporting the efforts to contain *M.c.* in the Islands and large sums of money are being directed against this one species. Legislative action has kept pace with control activities. Classified as a harmful species in French Polynesia since 1990, (Decree N°290 CM) and re-classified as a "species threatening biodiversity" in February 1998 (Decree N°244 CM), *M.c.* was also included on the "Noxious Weed List" of Hawai'i in 1992 (Hawai'i Administrative Rules, Title 4, Subtitle 6, Chapter 68, Noxious Weed Rules). Furthermore, cultivation and sale of *M.c.* was prohibited in Queensland, Australia, in 1997.

1997 was also the year when a cooperative agreement was signed between the Government of French Polynesia and the State of Hawai'i Department of Agriculture to develop a classical biological control program against *M.c.* An exploratory expedition is already planned in June-July 1998 in Guatemala, in search of natural enemies of *M.c.* in its native range. This document strengthens the cooperation initiated in September 1996 with the researchers and managers of the University of Hawai'i and the National Parks of Hawai'i. It also illustrates that international cooperation between governments can be achieved rapidly to address invasive species problems.

1998. The publication of these Conference Proceedings marks the 10th anniversary of the start of the **Miconia Research Program** in French Polynesia, jointly initiated in 1988 by the Government of French Polynesia and ORSTOM. In spite of numerous difficulties, the scientific results achieved, both basic and field-oriented applied research, are considerable. The presentations made during the Conference document the origin, bio-ecology and the distribution of *M.c.* in detail; demonstrate that the control strategies and methods that are currently used in the field are effective; and, illustrate that the public awareness and educational campaigns have worked as shown by the response of government authorities to this scourge and the widespread public support.

The Miconia Research Program in French Polynesia, as devised at the beginning in 1988, by 1998 evolved into a more general Miconia Management Program. This transformation is an important recognition by all concerned that action against this species had to proceed before all of the research was completed. This program, funded by the (French) State - (Polynesian) Territory Development Contract, includes several essential and inseparable elements: research, action, legislation, information and education.

In spite of several years of control efforts in the field, however, as well as prevention and information campaigns against *M.c.* propagation, the struggle has not been won yet. Even now, as these proceedings were being drawn up, we were informed that *M.c.* has been found on the island of Rurutu (Austral Islands) and that it might be present on the remote island of Rapa as well. Rapa is one of the three major biodiversity hot spots in French Polynesia (with Tahiti and Nuku Hiva). Since the island provides favorable habitat for *M.c.*, the introduction of this invasive plant to that island is another potential ecological disaster for French Polynesia that must be met with immediate and vigorous action. We have also been informed that several populations of *M.c.* have been discovered recently in Kuranda, a small tourist village located 25 miles to the west of Cairns, Queensland, Australia. More than 500 plants, some 8 m tall, were immediately destroyed and public awareness campaigns initiated (P. Davis, Land Protection Officer, Atherton, North Queensland, pers. comm., 1998).

It is not surprising to see that recently-published scientific books and papers of international importance now refer to the particularly dramatic and spectacular case of the invasion of *M.c.* in Tahiti. This species is now quoted as the worst-case example of an introduced plant that became invasive in the Pacific Islands by the South Pacific Regional Environment Program (Given, D. 1992. *The South Pacific Biodiversity Programme*, SPREP, Apia: 7) and by the International Union for the Conservation of Nature (McNeely J.A., Harrison J., and P. Dingwall (eds.), 1994. *Protecting Nature: Regional Reviews of Protected Areas*, IUCN: 274). It should be noted also that the latest edition of the dictionary of vascular plants (Mabberley, D.J. 1997. *The Plant Book. A Portable Dictionary of the Vascular Plants*, Cambridge University Press: 454) has now added in its paragraph concerning the genus *Miconia* a quote on the invasion of *M.c.* in the native forests of Tahiti, a fact not presented in the first edition of 1987.

Our collective experience in the management of the invasion by this extremely aggressive, alien plant stresses the need for:

- 1) closer coordination and cooperation between land managers, government administrators, conservationists, scientists, NGOs and volunteers to more effectively integrate efforts to prevent the introduction and establishment of invasive plants as well as control and eradicate those already present. "Invasive plants do not respect government structures" (J. Waage of the International Institute of Biological Control stressed during the international conference on invasive introduced plant species organized in Canada by IUCN in 1996);
- 2) increased cooperation between the countries of the Pacific region in order to avoid the progressive and insidious homogenization of their floras, which are often rich and unique, by biological invasions. Indeed, in the Pacific Islands, the erosion of biodiversity does not only mean the loss of natural resources but also the disappearance of a cultural heritage.
- 3) better participation by all concerned in efforts to exchange information and ideas via networks, and services provided on the internet.

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