Chromolaena odorata (L.) R.M. King and H. Robinson in the Congo.

(*Chromolaena odorata* (L.) R.M. King et H. Robinson au Congo)

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Introduction

C. odorata was introduced to Congo more than 3 decades ago. Its rapid growth makes it the most dominant weed in idle lands. Even though the majority of the population consider *C. odorata* as a noxious weed, some people find the plant beneficial. Based on personal observations and investigations conducted in Congo, this paper describes the present status of the plant in Congo.

Origin

Originating in Central and South America and the Caribbean, *C. odorata* was introduced to Asia in the 1840's. It came to Africa from Asia in 1937. *C. odorata* was first collected in 1965 (Gautier 1992), however, farmers began to notice the weed in the early sixties during the presidency of Marien N'gouabi, for whom the plant was named.

Habitat

C. odorata is found throughout Congo with the southern and southwestern regions being most affected (Fig. 1). The central region is currently being colonized. In the northern part of the country, *C. odorata* is less frequent. *C. odorata* is found in a variety of landscapes. Its spread is facilitated by land cultivation, road construction, and electrical lines. In cities, *C. odorata* even occurs in vacant lots and along sewer lines that are not being maintained.

Local names

The most popular names of *C. odorata* in the south and southwest are: lantana of N'gouabi, Mataya onbala (the invader); Comilog (a railroad company); Kalamilebe; Kalamana; and Diabantou (toxic).

Noxious effects

Due to its rapid growth rate, *C. odorata* displaces other spontaneous plant species from the forest and savanna. *C. odorata* also contributes to forest degeneration (de Foresta 1991). In addition, *C. odorata* reduces diversity of the vegetation and decreases the quality of pasture. Another ecological impact derives from its representing an optimum breeding habitat for *Zonocerus variegatus* (Bani 1990).

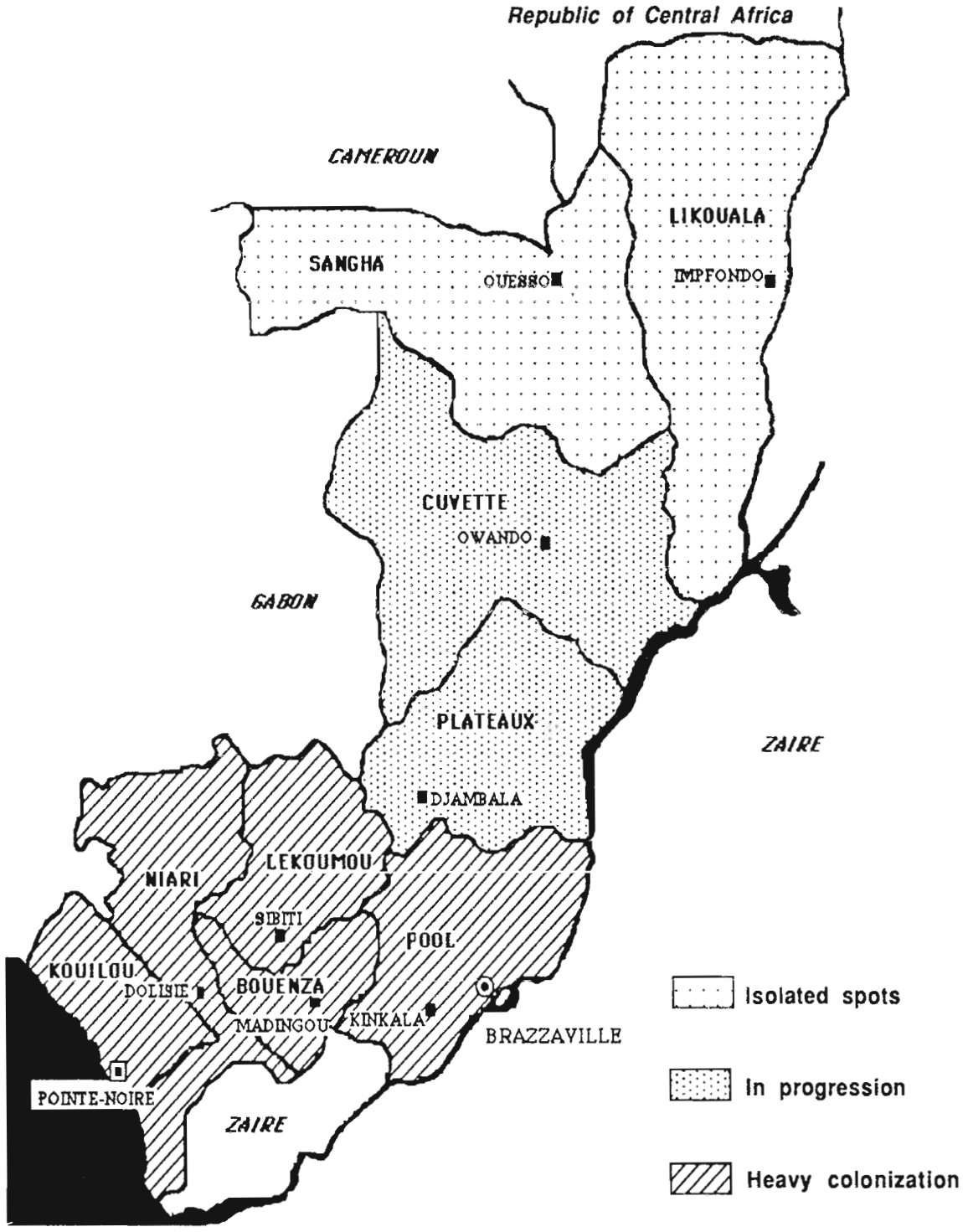

Figure 1. Status of *C. odorata* in Congo.

Farmers from the forest region of Chailla avoided growing cassava in areas where *C. odorata* is present because cassava roots are made more susceptible to rotting. In the area of Sibiti, an entire family is reported to have died during the 1980's after eating leaves of *Solanum aethiopicum* contaminated with leaves of *C. odorata*.

Benefits of *C. odorata*

Farmers in the Niari valley claim that C. *odorata* improves soil fertility, as seen in increased peanut productivity. This observation was confirmed by Madembo and Ekonamine (1993). *C. odorata* also inhibits the development of *Imperata cylindrica* and shortens periods of fallow land in Kombe and Niori valley from 6-7 to 3-4 years. Nematicidal effects of C. *odorata* were reported by Matondo *et al.* (1993). Oil extracted from leaves of *C. odorata* are reported to have potential insecticidal properties. Some medicinal properties are also attributed to *C. odorata*.

Actual status of *C. odorata*

The average Congolese farmer is concerned about the presence of *C. odorata*, and there is a tendency to request its removal. *C. odorata* is listed as a pest in the country and a national control committee has been established.

Control

Biological control of *C. odorata* seems to be generally accepted in the scientific community. Because a survey of the natural enemies of *C. odorata* did not show any host specificity, it will be necessary to introduce an exotic biological control agent. Table 1 lists the phytophagous insects found on *C. odorata*.

Table 1. Phytophagous insects found on *C. odorata* in Congo.

Zonocerus variegatus L., (Orthoptera: Pyrgomorphidae)
Anoplocnemis curvipes (Heteroptera: Coreidae)
Phenacoccus madeirensis (Homoptera: Pseudococcidae)
Ferrisia virgata (Homoptera: Pseudococcidae)
Orthezia sp. (Homoptera: Ortheziidae)
Aphis citricola Van der Goot (Homoptera: Aphididae)
Urleucome composidae (Homoptera: Aphididae)

Conclusion

The desire to control *C. odorata* was clearly expressed by farmers. The weed's potential increase of soil fertility does not justify its presence. However, more research is needed on the advantages and disadvantages of *C. odorata*.

Ecological studies need to be conducted in areas where *C. odorata* does not frequently occur. The National Committee for the control of *C. odorata* welcomes any initiatives and collaborations with other institutions aiming at the same goals.

References

Bani, G. 1990. Stratégies de lutte contre le criquet puant, *Zonocerus variegatus* (L.) (*Orthoptera: Pyrgomorphidae*) au Congo. J. Afr. Zool. 104: 69-76.

de Foresta, H. & D. Schwartz. 1991. *Chromolaena odorata* and disturbance of natural succession after shifting cultivation: An example from Mayombe, Congo, Central Africa. 2nd Int. Workshop on Biol. Control of *Chromolaena odorata.*, pp. 23-41, Bogor, Indonesia.

Gautier, L. 1992. Contact Forêt-savane en Côte d'Ivoire centrale: Rôle de *Chromolaena odorata* (L.) R. King & H. Robinson dans la dynamique de la végétation. Thèse de Doctorat, Université de Genève. 260 p.

Madembo, C. et A. Ekonamine. 1993. *Chromolaena odorata* (*Eupatorium odoratum*): Généralités, réalisations et perspectives. Doc. multigr. 11 p.

Matondo, H., A. Marabeye, E. Miambi et G. Reversat. 1993. Effets de composts de *Chromolaena odorata* (L.) sur les nématodes phytoparasites. *In* Protection naturelle des végétaux en Afrique. Actes Atelier, 1991. Dakar, Enda-Editions. Série Etudes et Recherches n° 154-155-156.