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## III

## ZOOLOGY AND BOTANY

## III.1. Zoology

Social scientists conducting field research in Irian should have a reasonable knowledge of the animals and plants of the area, and more so of the plants than of the animals. It is on plants that the people rely for their food and medicine. They are horticulturalists and most of them have a keen interest in, as well as a good practical knowledge of, the plants of their environment. For this reason we can afford to be brief on the fauna of the area. For an introduction to the fauna of the area the following publications are recommended: Westermann (1947, 1948-49), Boschma (1954), Brongersma (1954, 1956a, 1956b, 1958), and Konrad and Sukarja Somadikarta (1975).

III.2. Botany<sup>1</sup>

Summary introductions to the flora and vegetation of Irian are provided by Beversluis (1954) and Van Steenis (1954). More elaborate are Paymans (1976), Van Balgooy (1976), and Fundter and Wisse (1977). A phytogeographical analysis which provided the basis for Van Balgooy, is Lam (1934). Useful introductions to food crops and ethnobotany are given by Massal and Barrau (1956), Barrau (1958, 1963), and Powell (1976). For the determination of plants use may be made of Backer and Bakhuizen van den Brink (1963-68), a complete, non-pictorial, flora, useful for the identification of a wide range of "ordinary" plants in Irian such as weeds and roadside and garden plants, and of the Handbooks of the flora of Papua New Guinea (Handbooks 1978-81). Of the latter, two parts have been published so far.

Further, mention should be made of a relatively brief work which may be of great use to the social scientist who sees himself confronted with problems of plant determination and feels the need to make enquiries with a botanical institute, namely Womersley 1969. Womersley (1981) is an elaborate manual for social scientists containing instructions for collecting and conserving herbarium materials. Among other works that may be recommended are the so-called Boswezen Rapporten, a series of aerial surveys and forest explorations published by the Forestry Service in Netherlands New Guinea, mostly between 1950 and 1961. Most of these reports are mimeographed, others only typewritten. Usually pho-

<sup>1</sup> By Prof. C. Kalkman, now director of the Rijksherbarium at Leiden, and formerly research fellow with the Agricultural Research Institute of West New Guinea.

tographs and tables are included. These reports are kept in only a few places, some of them in the library of the 'Rijksherbarium' at Leiden, others in the Rapporten Archief van het Kantoor van Bevolkingszaken (see Nienhuis no. 895). Perhaps a complete set is to be found in Manokwari and/or Jayapura. Included are reports on: Asmat, Moni-Ransiki, Tor-Biri, Sekoli, Warsamson, Kebar, Beriat, Muyu, Boven-Digul, Sedei-Wasiki, Siduars, Oost-Yapen, Tami, and Pionierbivak.

Another series that is recommended is the Land Research Series, edited by CSIRO (Commonwealth Scientific and Industrial Research Organisation, Canberra). It provides data on climate, soils, land utilization, vegetation, geomorphology. The series also includes reports on parts of Papua New Guinea (1952-77). Further titles on botany have been included in section III.3.

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