

Rose Atoll: an Annotated Bibliography

K.A. RODGERS^{1*}, I.A.W. McALLAN², CAROL CANTRELL³ & BONNIE J. PONWITH⁴

¹Department of Geology, University of Auckland
Private Bag, Auckland, New Zealand

²46 Yeramba St,
Turramurra, NSW 2074, Australia

³Australian Museum,
PO Box A285, Sydney South, NSW 2000, Australia

⁴Department of Marine and Wildlife Resources
Pago Pago, American Samoa

ABSTRACT. Over 290 citations of published monographs, articles from learned journals, periodical features, official reports, letters, notes, some limited circulation and/or unpublished documents, and unofficial reports, concerned with the geology, geography, pedology, biology, meteorology, oceanography and history of Rose Atoll, American Samoa, are indexed and annotated.

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Rose Atoll lies at the extreme eastern end of the Samoan island volcanic chain (14°32'S 168°08'W), 240 km east-south-east of Pago Pago Harbor (Fig.1). It is of a roughly square shape. The fringing reef and lagoon together cover just 640 ha making it one of the smallest atolls in the world. The fetch of the lagoon is about 2 km and the maximum depth about 20 m. The coralline algal reef has a uniform, 500 m width and is largely submerged at low tide. A single channel in the north-east, 1.8-15 m deep, links the lagoon to the sea.

The atoll is one of the least disturbed areas of the world. Its benthic community is unique in Samoa, being dominated by encrusting coralline algae, and having a relative abundance of soft corals with a comparable

impoverishment in hard species (Itano, 1987, cited in United Nations Environment Programme, 1988). The atoll has been established as a National Wildlife Refuge since 5 July 1973, and annual resource surveys are carried out by US Fish and Wildlife Service and American Samoan Government personnel. These include both the lagoon and outer reef as well as the islets, thus affording an invaluable scientific baseline for biological and geological studies of low Pacific islands.

Excellent summary reviews of the history and natural history of the atoll are given by Setchell (1924) and Sachtel (1954). A highly detailed, up-to-date account of the terrestrial biology is contained in Amerson *et al.* (1982a,b).