
Introductory Remarks

T. S. Westoll

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Introductory remarks

BY T. S. WESTOLL, F.R.S.

Chairman of the Aldabra Research Committee of the Royal Society

Aldabra is, on the face of it, a somewhat insignificant subject for so much research—one of a scattered group of four atolls lying between the northern tip of Madagascar (Malagasy) and Mombasa. Its importance lies in its relatively undisturbed character, since all the other elevated atolls in the western Indian Ocean have been exploited for guano, copra, etc., and this distinction has been appreciated for a long time. The reason for its condition is not far to seek, since the atoll has formidable natural defences against intruders. But such obstacles would not stand against planned operations for military purposes, and when it became known that Aldabra was to be surveyed for a staging-post for military aircraft, and as a site for a major B.B.C. station, the Royal Society and other bodies moved quickly to try to prevent massive interference with the atoll. D. R. Stoddart and C. A. Wright accompanied a survey party in September 1966, and their findings strengthened the case for conserving Aldabra for scientific investigation and preservation. The Royal Society, in association with other bodies in Britain and with the Smithsonian Institution and the National Academy of Sciences in Washington, vigorously opposed the proposed installations, and in view of the threat the Royal Society began a series of expeditions to Aldabra. These began as a crash programme to record as much information as possible, but the cuts in the Defence programme announced at the time of devaluation in November 1967 postponed, at least for some time, construction of an airfield and other installations. The research programme could thus be consolidated and planned, and the Aldabra Research Committee was set up for this purpose. Since the reconnaissance of September 1966, six phases of Royal Society expeditions have been completed, phase VII is now on the island, and phase VIII is fully committed. In all, over forty persons participated in the first six phases, including four from the Smithsonian Institution and two from the University of the Witwatersrand; ten of these have been on more than one phase. The overall expedition leader is D. R. Stoddart. The Aldabra Research Committee works in close collaboration with representatives of the U.S. National Academy of Sciences and with the Smithsonian Institution, and we look forward to long-term cooperation. Future military and other claims upon Aldabra could still arise, and the Research Committee must therefore develop a 'rolling plan' for research, with regular revision of a crash programme in case of emergency.

Aldabra has a most interesting fauna and flora, relatively little disturbed. Why, it has been asked, was it not systematically studied earlier? Apart altogether from its remoteness, its unusual tides which can make landing difficult at times and result in fierce currents in the channels, the extraordinary difficulty of the terrain, and the lack of fresh water, the best answer is the simple one, that such an ecological system is much better off if it is little known to the world and undisturbed. Now that it has become widely known, it should be preserved as far as possible from being overrun. The Royal Society has therefore planned to set up a research station near the small settlement on West Island, with a minimum resident staff and strictly limited accommodation for visiting scientists, so that a deliberate research programme can be carried out with minimum interference with the ecology. It was announced, just in time for this

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meeting, that an initial capital grant of £36 000 from a Parliamentary grant-in-aid has been allocated to this station, and we are all most gratified by this news. George Lush has been given the task of establishing the station.

While the landward flora and fauna of the atoll, the innumerable creatures of its reefs and lagoon, and the large avifauna of the shores and nearby seas, must form an obvious target for study and protection, another is the atoll itself. Since the time of Darwin atolls have attracted much attention, particularly in relation to up-and-down movements of the geological structure on which the reef-building organisms have grown, and to changes in general sea-level. The geological history of Aldabra clearly bears upon the history of its population, and the deep structure of the atoll deserves geophysical and geological exploration, with comparative studies of other islands in the area. It is reasonable to suppose that Aldabra—which closely approaches in shape the ‘average’ atoll as described by Stoddart—consists of carbonate rocks on a submarine elevation, probably a truncated cone of volcanic origin. Magnetic and gravity surveys, perhaps followed by some seismic profiles, should give a good idea of the shape and dimensions of this foundation. Perhaps in due course a drilling programme might provide fossil evidence of the geological history of the carbonate rocks, and yield samples of the foundation materials suitable for isotope age determinations. The classic Royal Society investigation of Funafuti could be surpassed in every way were our more advanced techniques and knowledge to be applied to Aldabra and nearby islands. The limestone of the surface of Aldabra can be studied in relation to the processes, structures and deposits characteristic of the present reef front, reef top, channels and lagoons; it is already clear that the atoll has—like most oceanic coral islands—a record of late Pleistocene and Holocene changes in sea level, and it remains to be seen whether it can also yield evidence of changing temperatures and climates. All of these points bear ultimately on the origin and rate of differentiation of the island biota.

We are happy to have with us today many who have been of great help to the Expedition. The Governor of the Seychelles, who is also the Commissioner for British Indian Ocean Territory (of which Aldabra is part), was, until early this year, Sir Hugh Norman-Walker. Both he and the Administrator, John Todd, have been immensely helpful and we are delighted that they can join us. When Dr Poore, Dr Stoddart and the speaker visited Aldabra and other islands in B.I.O.T., and the Seychelles, in September 1968, Sir Hugh and Mr Todd, with many other officials, gave us the fullest and most understanding cooperation, and it is a pleasure to thank them here. We also have to offer our most cordial thanks to Harry Savy, the lessee of Aldabra, and are happy to see his son in our audience. To all of those who have taken part in the expeditions, many of whom are here, I wish to extend my personal thanks. It was hoped that Lady Fryer, whose late husband made an important contribution to our knowledge of Aldabra in 1908, might have been present today; she is not able to be with us, but I feel sure we would all wish to send our greetings. It is particularly pleasant for me to welcome Dr Fosberg as a representative of our American friends, and to see that Dr Macnae has been able to make the journey from South Africa.

All of us who have been recently in Aldabra will re-live many experiences during this meeting, and will yearn for some of Aldabra’s warmth and light in a dragging English winter.