"OPERATION NOAH"—SURVEY COMPLETED

A small section of Argyle Lagoon which will be completely inundated by the floodwaters, including the hills in the background

The team from the Western Australia Museum have completed their biological survey of the Ord River Basin and submitted their preliminary report to the W.A. Wildlife Authority. The objectives of the survey were threefold. Firstly, to survey and record the habitat and species of vertebrate animals, molluscs and spiders. Secondly, to determine what animals would require rescuing when the dam begins to flood, where they are likely to be stranded, and what should be done with them once they have been rescued. Thirdly, it was hoped that the information accrued during the survey would enable some predictions to be made on the ecological changes that may occur in the area.

Three areas within the flood region are thought to contain the representative fauna of the Ord Basin, and it was in these areas—the south-west, central-west and north-west—that the fauna survey was conducted. Surveys were also undertaken of the freshwater pools and lagoons of the area, and fish collection was concentrated mainly on the pools lying in the bed of the Ord River between Argyle Lagoon and the junction of the Ord and Bow Rivers.

The survey effort was divided into two phases. The first phase, a general fauna survey, took place from October 1st to 20th. For this survey the team split into three groups:—

(1) Mr. Rolly McKay and Mr John Dell.
(2) Mr Harry Butler.
(3) Dr Darrell Kitchener and Mr Rick Grave.

From October 6th to 13th, Dr. Barry Wilson was with the party and he joined the groups that allowed him the best coverage for his collecting activities.

Although members of the team collected anything and everything of interest that they found, each member is a specialist in a particular field:

Mr McKay—Lycosid spiders and freshwater fish.
Mr Dell—Frogs and birds.
Mr Butler—Birds, mammals and reptiles.
Dr Kitchener—Mammals.
Dr Wilson—Freshwater molluscs.

Each member of the team had an opportunity to examine each of the three study areas, thus enabling a specialist coverage of all the animals in all the selected habitats.

The second phase of the survey took place between October 20th and 26th, and concentrated on the areas that may become important during the rescue operation and any habitats that were not covered in the first phase of the survey.

Each survey team set traps in habitat that showed signs of animals or appeared to be suitable for small mammals. In addition to trapping, spotlighting was conducted at night to determine the species of larger animals in the area and their distribution.

All birds sighted were recorded to provide information on the numbers of species present, their density and their habitat preferences. Observations on feeding habits, breeding and social behaviour were recorded, and those birds which could not be positively identified in the field were shot and a skin prepared of the specimen.

Reptiles were either collected by hand from beneath logs, stones, etc., or were shot with fine dust-shot in the morning or early afternoon.

For the first ten days the party camped in relative "comfort" on the verandah of the old Argyle Downs Homstead. But when the Public Works Department moved in to dismantle this historic building for relocation, the party moved out under tarpaulin in temperatures up to 113°F. Mr Colin Waldon, the Editor of S.W.A.N.S., who was present from October 6th to 16th, described the conditions as extremely arduous. Members of the team worked from 5 a.m. to 10

p.m. virtually every day; these long hours were necessary in order to locate some of the fauna which only appeared in the cooler temperatures of the early morning and late evening.

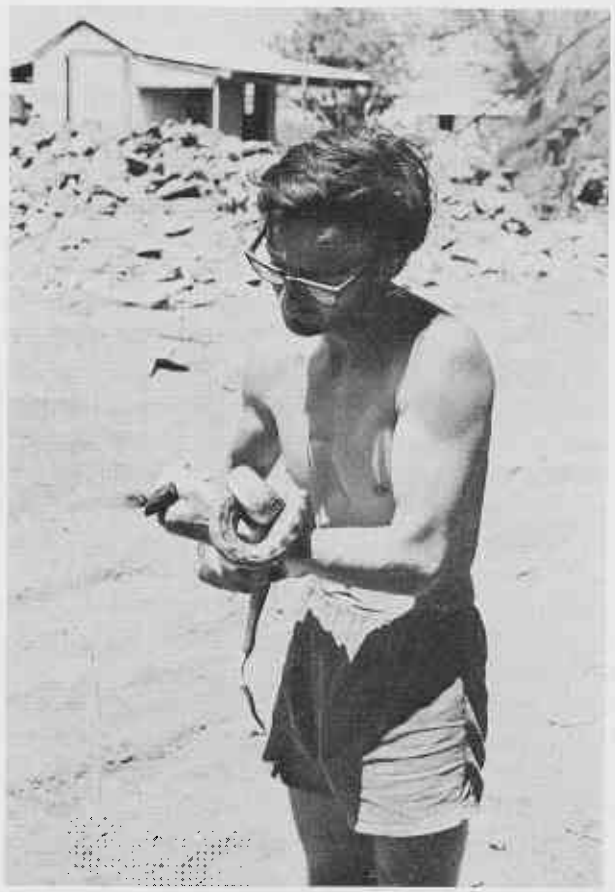
As a result of the party's observations, their studies and their collections of animals, it was discovered that the area contains only a limited number of species of mammals. However, there are some moderate-sized populations of Short-eared Rock Wallabies and Nail-tailed Wallabies. Euros and Sandy Wallabies are also present but in lesser numbers. Small mammals are extremely scarce, as are dingos, but feral cats are numerous and fairly evenly distributed. Several herds of donkeys are present on the west bank of the Ord, and, scattered throughout the area are numerous cattle which were missed at the final mustering undertaken by the stations in the area. It will be necessary to shoot any donkeys or cattle which become marooned on islands formed by the rising floodwaters. The only alternative would be to leave them to starve or drown and this would be inhumane.

The riverine open woodland country and the low hilly country around the mouth of the Behn River and Hicks Creek will be the first land to be flooded. The Museum team consider that Sandy Wallabies and arboreal (tree-living) species will be among the first animals to be stranded, and recommend that the initial rescue attempts should be concentrated in these two areas. The second area to be flooded will be the extensive grass plains which extend out from the major watercourses, and it is considered that Nail-tailed Wallabies will be stranded on the many low islands formed by the joining of creeks and watercourses. These plains will have to be constantly watched because they will be rapidly inundated. The Museum team recommend that the last animals to be rescued should be the Short-eared Rock Wallabies and Euros, because these animals inhabit only the higher hills. It will be necessary to allow these islands to be reduced in size in order to confine the animals to a smaller area and thereby facilitate their capture.

The number and size of the islands which will be established will depend on the volume of water in the coming wet season. However, it is thought that those islands which will remain will be too small and too barren to support any animals; it will therefore be necessary to move populations to other suitable locations.

During the four-week survey, Messrs. Harry Butler and John Dell identified 149 different species of birds, and this number will increase with the subsequent identification of other species by the Museum. Birds should find no difficulty in escaping from the rising waters and establishing themselves in suitable habitat adjacent to the newly-formed lakes. The reptiles of the area will concentrate in trees and higher ground during the flooding, and it is expected that Mr. Harry Butler, who is familiar with the handling of poisonous snakes, will undertake this aspect of the rescue operation.

A second opportunity to study the fauna of the area will arise when the filling of the dam commences, because the rising water will undoubtedly flush-out species of animals which were not observed during the October survey. Another team from the W.A. Museum will be present when the Operation Noah team commence their rescue operations. This team will ensure that by the time the lake is established a comprehensive picture will have been built up of the biota of the Ord River Basin, and this will be invaluable in monitoring future changes which might occur as a result of altering the ecology of such a large area.



Mr Rolly McKay with a water python. Part of the now-demolished historic Argyle Downs Homestead can be seen in the background

It is not possible to say when the actual rescue operations will commence, but if the pattern of the rainfall follows the overall pattern of previous years, the Operation Noah team expect to be called to the rescue area in mid-January. Messrs. Neville Beeck and Henry Hall, the project co-ordinators, will be the advance party and will go North as early as New Year's Day or as soon as the Ord is termed a "goer". Their immediate task at that stage will be the assemblage and double-checking of all the equipment, and it will

be their responsibility to determine when the floodwaters have risen sufficiently to enable their team to begin rescue operations.

The other seven members of the nine-man party will be prepared to move at a moment's notice. They will fly into Kununurra and set up camp at the main dam site. Accommodation and messing will be provided by facilities left at the dam site by the Public Works Department.

The rescue operations will be carried out from two 17 ft. 6 in. De Havilland run-abouts fitted with 40 h.p. outboard motors, and a third, smaller boat will be used by Mr. Butler for the rescue of reptiles. A spotter-plane, piloted by Mr Rick Grave, will be used for two or three reconnaissance flights each morning to sight animals and to report on the rate of inundation of specific areas. Two-way radios will be used to maintain contact between the plane, the boats and the base camp; this will enable Mr Grave to direct rescuers to those areas which require priority.

When the rising water reduces an island to a practical size, the teams will land and drive the animals into the water. This procedure will be adopted when animals are very agile and the terrain is such that capture on land would be virtually impossible, as well as extremely exhausting. On larger and more accessible islands trapping will be carried out. It is hoped that the shortage of food will cause the animals to more readily enter baited cage-traps. Once animals have been caught they will be placed in onion bags, which will restrict their movements and prevent them from injuring themselves. The open mesh of these bags will lessen the effect of the harsh temperatures which generally affect confined animals. The rescued animals will not be kept confined any longer than is absolutely necessary, but will be moved rapidly to suitable new habitats determined by the Museum survey.

However perfect the organization and techniques of the Operation Noah team may be, it is inevitable that some animals will be lost during the rescue operation. Experience from operations on a smaller scale and under better conditions indicates that the translocation of animals always results in some percentage of mortality due to shock etc. However, all the members of the rescue team are highly experienced in the handling and care of fauna, are themselves ardent conservationists, and, despite the fact that the rescue operations will present some personal hazard, they will ensure that every effort is made to rescue the greatest possible number of animals.