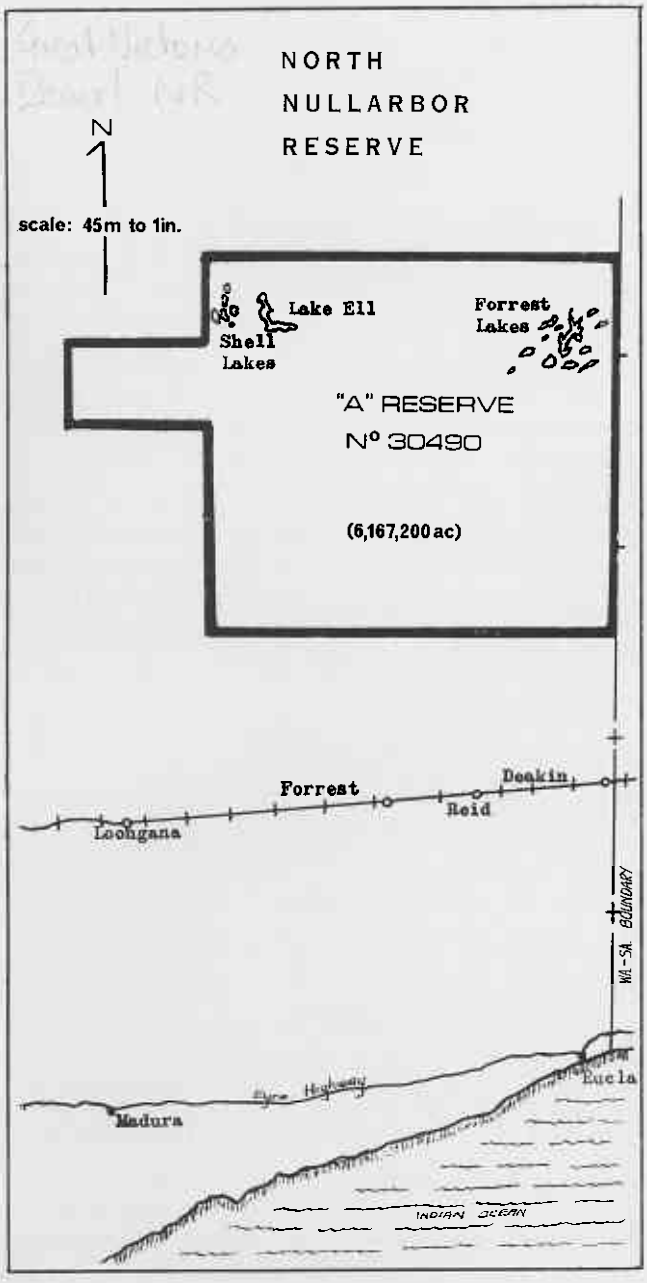
W.A.'s FAUNA RESERVE AREA DOUBLED

The creation of a new 6-million acre reserve which has doubled the area for conservation of flora and fauna in Western Australia was announced by the Minister for Fisheries and Fauna, Mr. G. C. MacKinnon, in September.

Now vested in the Western Australian Wild Life Authority, the area is a tract of semi-desert adjoining the South Australian border and is four times as large as the next biggest conservation reserve. A notice setting the area aside was published in the Government Gazette on August 21st. The reserve, known as the Northern Nullarbor Wildlife Sanctuary, contains 6,167,200 acres.



This large area of country was originally recommended for reservation by the Sub-Committee on National Parks of the Australian Academy of Science in 1962.

The area includes regions which are representative of all the geological formations of the northern Nullarbor area and their associated vegetation which ranges from the typical almost treeless, flat-lying marine limestone of the Nullarbor to the Precambrian areas further north.

A transect from the south-west towards the north-eastern corner of the reserve broadly illustrates the regions of the area.

1. The southern edge is the typical, almost flat, limestone country of the Nullarbor. Numerous dongas act as drainage channels. The general vegetation is a grassland of *Stipa* with Sturt Pea and Swainsona. Where thickets occur, the principal trees are *Myoporum, Pittosporum phillyraeoides* and Curara *(Acacia tetragonophylla)*.

2. To the north of the grassland, the limestone country continues, but the vegetation changes to an open woodland of Myall *(Acacia sowdenni)* with an understorey of Bluebush *(Kochia* spp*)*.

Open woodland of Myall with an understorey of Bluebush south of the Shell Lakes

3. Further north the geological nature of the country changes; the dominant rock is micaceous sandstone while the country becomes more undulating with rolling hills and broad valleys in which are poorly defined water-courses.

4. To the north is a rather narrow belt of sands not blown into dunes, and on which occur the first eucalypts *(E. oleosa* and *E. gracilis)*. Beyond these sands are the Shell Lakes, one of a series of large salt pans which extend across the northern limit of the Nullarbor.

Eastward from the Shell Lakes to north of Forrest Lakes, the country is, geologically, a complex of Permian glacial beds, flat-lying well-bedded sandstones, limestones of the Nullarbor complex and Precambrian quartzites. The whole of this area is traversed by innumerable east-west sand dunes which are blown over all of these rock types.

A temporary native catchment in the Shell Lakes System

The vegetation is rich and extremely varied. On the sandhills, spinifex, mallee and acacia are dominant. In the hollows between dunes the vegetation varies with the soil type but eucalypts such as *E. oleosa* together with Mulga *(Acacia aneura)* are common.

Ferruginous sandstone typical of the northern Forrest Lakes area

Around the salt flats are found *Atriplex* spp., *Rhagodia* spp., *Kochia* spp. and *Arthrocnemum.*

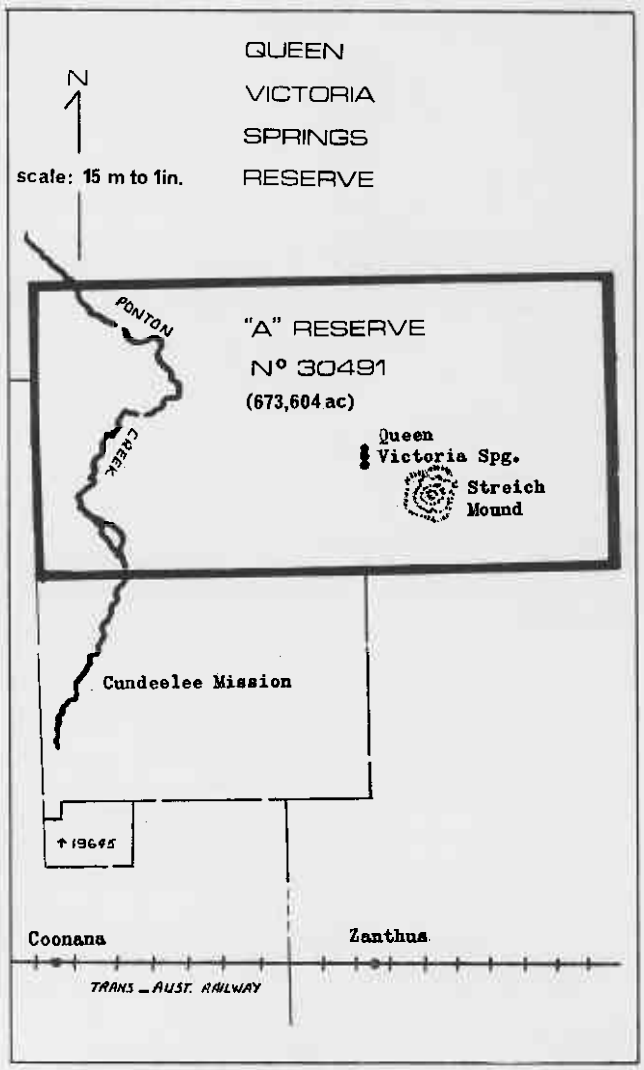
The floral diversity of the region is shown by the common genera which are represented as follows: *Eucalyptus* (9 species), *Acacia* (8 species), and *Eremophila* (8 species). Also in the flora are such genera as *Stylidium, Daviesia, Dampiera* and *Templetonia.*

Mygalomorph spiders, frogs, reptiles and birds suggest that this region is, even now, acting as a corridor connecting the faunas of eastern and western Australia. Mammals are not great in variety in the area but the Marsupial mole *(Notoryctes)* is found in the desert sand dunes. The mole is a highly specialised blind creature and is an amazing example of evolutionary processes known as convergence. Although quite unrelated to the true mole of the northern hemisphere, the marsupial mole is very similar in shape, size and habits. At this stage, little is known of its natural history. In its report, the sub-committee of the Australian Academy of Science indicated that the area would yield much significant information on the biogeographic relationships between eastern and western Australia.

QUEEN VICTORIA SPRING RESERVE

In the same issue of the *Government Gazette* another important reserve was set aside. It is known as the Queen Victoria Spring Wildlife Sanctuary.

The area comprises 673,604 acres and is situated some 30 miles north of Zanthus.



Queen Victoria Spring was discovered in 1875 by the explorer Ernest Giles who named it after Her Majesty, Queen Victoria.

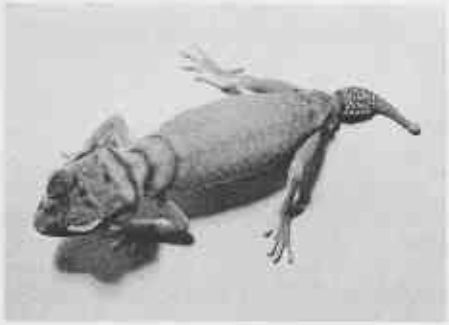
The Spring is actually a soak situated in an area of grassland surrounded by small bushes, Eucalypts, Acacias and Spinifex. The soak itself is in sand on a clay bottom and has apparently formed in an old clay pan which has filled with drifting sand. The highest feature in the area is Streich Mound, a sandhill approximately 1,100 ft. high and about nine miles east-south-east from the Spring.

The reserve has numerous sand dunes in it. These dunes overlay gneiss, and are representative

of the environment of the boundary of the interior sandy desert and the metamorphosed Precambrian of the Goldfields.

Looking west from Queen Victoria Spring showing representative flora types—*Acacia, Triodia, Callitris* and *Duboisia*

The flora is interesting in that it is a desert association which includes winter rainfall Mulga. The predominant vegetation in the area is Spinifex *(Triodia)* steppe and the several species of *Triodia* form the dominant vegetation over the greater part of the area. In certain sections these grasses are replaced by *Eriachne, Eragrostis,* and *Aristida.* Goodeniaceae is well represented among the shrubs, while species of the families Malvaceae, Leguminosae, Proteaceae, Compositae and Chenopodiaceae are common. The tree storey consists chiefly of *Eucalyptus,* the principal species being *E. gongylocarpa, E. oleosa* var. *glauca, E. flocktoniae,* and the mallees *E. cylindrocarpa, E. concinna* and *E. leptophylla. Acacia* is well represented, as are *Callitris* and *Eremophila.* Two interesting features are the numerous isolated patches of Mulga and the very large specimens of the grasstree or Blackboy *(Xanthorrhoea thorntoni)* which are common in the area.



A rare species of desert Gecko, *Nephurus laevissimus*

No comprehensive studies have been made of the fauna; however there are various records of reports made by naturalists and surveyors. For example, this is the furthest eastern locality of the frog *Neobatrachus sutor.* The rare desert Gecko *(Nephurus laevissimus)* also occurs in the area together with a new species, *Diplodactylus maini* which was unknown to science before 1962.

The new species of Gecko, *Diplodactylus maini*

NEW FAUNA RESEARCH CENTRE

A new, $110,000 Fauna Research Centre will be built for the Research Branch of the Department of Fisheries and Fauna. This was announced in October by the Hon. G. C. MacKinnon, Minister for Fisheries and Fauna.

The purpose of the centre is to provide facilities for studies of wildlife management problems under laboratory and simulated natural conditions. Steps will be taken to ensure that the centre is aesthetically attractive and that the public will have access to the parklands surrounding it.

Mr. MacKinnon went on to say that negotiations were proceeding between the Shire of Mundaring, the Metropolitan Region Planning Authority and the Lands Department for the use of an area of some 50 acres of suitable land 2 miles south-west of the Glen Forrest Townsite, close to the Helena River and near the C.S.I.R.O. Wildlife Research Station.

At present the fauna research staff of the Department are housed in various temporary premises in the city and suburbs. These are unsuitable and without adequate facilities said Mr. MacKinnon. The new establishment would provide suitable laboratories and equipment for the research scientists, a lake for waterfowl research purposes, animal holding pens, and adequate areas of natural bushland.

Mr. MacKinnon stressed the importance of proper location of the research station—it must be located where there is a minimum of pollution of the waters, air and soil, and not be subject to pressures or development by industry or urban settlement. At the same time the centre had to be close enough to utilise the facilities of the W.A. University, Museum, State Libary, Agriculture Department and the Government Chemical Laboratories.

It was anticipated that building of the new centre would commence in 1971. Messrs. Silver, Goldberg and Associates, Architects, have been invited to undertake its design.