Dams on the hillsides

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Peak Charles, about 30 miles west of Salmon Gums, is known to be a breeding area for dingoes which find ample water and shelter in caves on the Peak. Note size of man standing on rock in white circle.

By A. R. TOMLINSON, Chairman, Agriculture Protection Board, and A. G. MOORE, Vermin Control Officer

A SUCCESSFUL motorised expedition to collect information on the breeding areas and migratory movements of wild dogs was completed in March of this year. This was the second expedition of this nature organised by the Agriculture Protection Board and much valuable information was obtained which should simplify the work of the Board's doggers in the guarding of the sheep-breeding areas.

Information available in the Vermin Branch had indicated that, while well-defined breeding areas existed along the southern rivers between Ravensthorpe and Esperance, there was also some movements of dogs towards settlements from the vast uninhabited expanses south of Southern Cross between the No. 1 Rabbit Proof Fence and the Kalgoorlie-Esperance railway line.

Numerous requests had been received by the Board for aerial baiting to be carried out in these areas but the Board decided that it would be advisable to obtain more information by ground exploration before embarking upon extensive poisoning campaigns.

Following upon the success of the first expedition sent by the Agricultural Protection Board to investigate wild dog migrations on the Nullabor Plains, it was decided that a second expedition should investigate the country east of the Kalgoorlie-Esperance railway line and as far as Israelite Bay to check on any westerly movements of wild dogs along the coast from the Nullabor Plains.
PERSONNEL

Vermin Control Officer, A. G. Moore, who is in charge of dogging operations in the southern areas was the leader of this second expedition. He was accompanied by Mr. W. G. Cooper and Mr. W. Bartlett, both of whom are experienced Protection Board doggers.

The party travelled in the special five-ton International truck and the Willys jeep maintained by the Board for exploring outback areas. These vehicles carried supplies of water, fuel, food, baiting materials, etc., and also a Traeger wireless transceiver which was used for keeping the party in radio contact with Kalgoorlie.

The jeep travelled 2,327 miles and the truck 1,536 miles during the tour and although they were held up by 28 punctures both vehicles performed well without any mechanical troubles.

DETAILS OF ROUTE

After leaving Perth on January 30, the party travelled to Southern Cross and moved southward via Dulcie's Tank to Mount Holland and then south-easterly to Lake Hope near the Johnston Lakes. Dog tracks were observed at several points along the route particularly in the vicinity of Mount Holland and Lake Hope. A remarkably well-hidden water-hole used by wild dogs was located to the north-east of Mount Holland.

Exploratory trips were made to the south-east to Hatters Hill and Mount Gibbs near the Rabbit Proof Fence, and deviations were made to the east and north-east around and across portions of the Johnston Lakes. Signs of dogs were noticed on these trips including a well-frequented section near Mount Gibbs where water was plentiful, and also in

--- SECOND WILD DOG EXPEDITION ---
JANUARY - MARCH 1952.
-------- Route followed by vehicles. ---
the vicinity of Lake Medcalf and Wellstead Rocks where rock water-holes were found.

Travelling was continued eastward along the Lake King-Norseman Road and then the expedition turned south-westerly along the Ravensthorpe Road to Peak Charles, Dog Rock and on to Peter’s Soak. Dog tracks were observed along these roads and signs of frequent visits by dogs were found at a dam and rock-holes near Peak Charles and Dog Rock.

The journey eastward was resumed and the Kalgoorlie-Esperance railway line was joined at Kumar and followed down to Grass Patch. From Grass Patch the expedition travelled in a north-easterly direction for about 80 miles towards the Fraser Range, turning due east near Clear Streak Well and travelling along the Balladonia telegraph line. The first wild dog signs observed were about 60 miles along this route. Some tracks were found near Clear Streak Well and innumerable others were observed along the telegraph line.

Approximately 60 miles along the telegraph lines (about 110 miles east of the railway line) the expedition turned southward through Balladonia and Namanbinia Stations to Mount Ragged and then south-easterly to Israelite Bay.

No dog tracks were observed after leaving the telegraph line until south of the station properties at Junana Rocks. Hard areas to the north of the rocks were covered with a form of needle-grass which probably discouraged the dogs from travelling over this country. From Junana Rocks the coastal plains commenced and dog signs became increasingly numerous.

From Israelite Bay the expedition travelled westward to Esperance and it was evident that wild dogs were plentiful up to about 40 miles east of the port.

The return trip was made along the south coast through Ravensthorpe to Pingrup and then to Perth. Dog tracks were found near the Lort, Young and Oldfield Rivers and a breeding area was located at the head of the Munglinup River. Some signs were noticed along the Ravensthorpe-Pingrup Road near Long Creek, the 40-mile dam, and Lake Magenta dam.
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INFORMATION GAINED

It was shown that wild dogs were breeding in the areas between the No. 1 Rabbit Proof Fence and the Kalgoorlie-Esperance railway line. There appears to be ample water for them and most of their movements appear to be along well-defined roads or tracks. Thick scrub renders travelling elsewhere almost impossible. It is already known that there is a migration from these areas into the eastern Great Southern districts and it is now felt that it will be possible to cope with the movement by ground or aerial baiting.

To the east of the railway line there appears to be a definite east-west route used by dogs which runs south of the Fraser Range and north of Namanbinia extending in the direction of the Nullabor Plains.

South of this route, there appears to be a gap of about 70 miles over country unsuitable for dogs and then a well-defined breeding area along the coastal plains between Israelite Bay and a point 40 miles east of Esperance.

Dogs would probably drift from the northerly route westward and possibly others will move west from the south coast. However, although it was evident that a large number of dogs were breeding on the coast there was no evidence of any large-scale migration towards the west. Even when major invasions of the Nullabor Plains occur from the north, movement in this direction may be discouraged by unfavourable travelling country and the presence of the Esperance township and also one occupied property, the owner of which is particularly active against dogs across the route towards Esperance.

It is considered that as rabbits and kangaroos are numerous along the coast to the east of Israelite Bay there is probably a tendency for dogs to move in that direction, particularly if seasonal conditions on the Nullabor Plains have been favourable. It must be borne in mind that dog movements are influenced by the normal annual changes in the seasons, and there is a tendency

Gnamma holes at Wellstead Rocks. A good supply of natural water is accessible to dingoes.
Pump and stand-pipe at Welcome Soak on the old Ravensthorpe-Norseman Road. Bush animals cannot water here although there is an abundance of good water in the well.

for them to scatter at the fall of the first winter rains, due to the attractions of food and water in various areas.

The well-used route along the telegraph line and the coastal breeding grounds will be dealt with by ground baiting.

By studying the information gained from this expedition in conjunction with the Nullabor Plains explorations it seems that large-scale migrations from the areas to the north of the Plains may be dealt with in the routes already located. This could be done by extensive trapping such as has been undertaken in the past by private individuals, or by wholesale baiting which the Agriculture Protection Board has planned for the future. The two potential danger areas revealed by the second expedition should lend themselves to successful control by heavy ground baiting.

**OBSERVATIONS ON OTHER VERMIN**

Kangaroos were found to be plentiful to the east of Mount Holland at Welcome Soak, Dingo Rocks and Clear Streak Well. A few were noticed at Israelite Bay and they were again plentiful from the Thomas River to Esperance and along the Young and Lort Rivers to the west of the port.

Wild camels in small numbers were watering at Clear Streak Well and goat tracks were seen at Lake Medcalf.

Foxes were numerous at Israelite Bay and a few were noted at the south-western end of Johnston Lakes, also south of Lake Tay. Emus were plentiful at Dingo Rocks, Thomas River and the Johnston Lakes and a group of 20 was seen at the 40-mile dam on the Ravensthorpe-Esperance Road.

Rabbits were plentiful to the east of Mount Holland, a few were seen at the south-western end of the Johnston Lakes and at Clear Streak Well. They were quite numerous at Welcome Soak, at springs to the south of Nanamindia Station and along the coastal plain from Israelite Bay to Esperance. Large numbers were seen at Thomas River and also along the Young and Lort Rivers west of Esperance.
DAILY DIARY OF THE TRIP

By A. G. MOORE.

January 31.—Dulcles Tank. Several prospectors here and wild dogs unable to get water as tank roofed over. When travelling south, two dogs followed the road for several miles to Split Rock. Only water here is that caught in rock depressions—supplies drying up. No other tracks seen except those of emus between Split Rock and Mount Holland.

February 1.—Making baits and repairing truck tyre. Walked two miles up Holland's track—no water accessible to dingos at Mount Holland but small gnamma holes accessible to birds contained about 100 gallons. Well-defined dog beats to water holes from Holland's north-east track. Government tank still without roof, and cement tank dry. Eight hundred baits made.

February 2.—Travelled 20 miles north-east on Holland's track and discovered small rock hole about three miles from Mount Holland where dogs were watering. Dog tracks picked up and followed about two miles. On return detoured southward and ran into salt flats and ti-tree grassland. Tracks of kangaroos, rabbits and dogs plentiful with well-defined beats from lake to lake. Laid 300 baits. Road very rough and overgrown and had to mend three punctures en route.

February 3.—Shifted camp from Mount Holland to Lake Hope. Road fair. No water. Cement tank at 50 mile roofless and dry. Several small rock holes from Mount Holland to Lake Hope were too boggy for the jeep and we bogged twice so moved off the lakes. Dingo tracks scarce. Emus plentiful and some rabbits and foxes seen. Fifty baits laid.

February 4.—Explored Johnston Lake north-east of camp. Owing to recent rains lakes were too boggy for the jeep and we bogged twice so moved off the lakes. Dingo tracks scarce. Emus plentiful and some rabbits and foxes seen. Fifty baits laid.

February 5.—Exploring north-east of Johnston Lake travelled 37 miles in jeep and found two places where dogs were watering. Old road quite good except for fallen trees. One thousand one hundred and fifty baits laid. Four granite outcrops inspected but no water found.

February 6.—Travelled west of Lake Hope to Hatters Hill south to Norseman Road and east to 90 mile tank. Two patches where dogs were plentiful. One between Hatters Hill and Lake Hope, another at Mount Gibbs. Plenty of water at Mount Gibbs. Bartlett and self laid 1,270 baits using the jeep. Cooper took camping gear across to 90 mile tank on the Norseman Road. Dog tracks seen in Lakes area and 200 baits laid.

February 7.—Shifted camp from 90 mile tank on Lake King-Norseman Road to Lake Medcalf east of Bremer Range. Dingos plentiful for several miles along the road south and north of Wellstead Rocks where plenty of water accessible for animals and birds. Laid 650 baits. Road very narrow and winding and entailed much axe-work to enable truck to get through.

February 8.—No travelling. Made 2,000 baits. Repairing tyres and transceiver.

February 9.—Travelled eight miles north-east and 29 miles north-west. Dogs watering at Lake Medcalf rock holes on south end of lake. Tried to reach Wheeler Rock Road but prevented by rocks and scrub. Laid 600 baits. Saw dog tracks and goat tracks crossing end of Lake Medcalf.

February 10.—Shifted camp to Dock Rock and explored Peak Charles. Two dingos had been watering at rocks six miles north of Peak Charles but no dogs at the peak itself. Some scratchings at Dog Rock. Country generally not suitable for bush animals being too scruffy and thick to hunt food. Laid 250 baits.

February 11.—Possibly same dogs scratched at Dog Rock are also watering at dam and rocks to the north. Laid 325 baits.

February 12.—Travelled with jeep westward along old Ravensthorpe-Norseman Road 32 miles from Dog Rock, two miles past Peter's Soak which was dry. Dingos travelled in ones and twos along patches of the road but they were unable to find water to which animals had access. In the area of Welcome Soak, rabbit and kangaroo tracks were seen. Water plentiful in the soak inside rabbit netting fence and in a covered well with pump and standpipe. More fox tracks seen around large lake north of soak. Laid 950 baits.

The jeep under the roof catchment of the 90-mile Tank between Lake King and Norseman. An excellent supply of cool rainwater here which is inaccessible to animals.
On the old road from Grass Patch to Fraser Range. The road (?) lies straight ahead of the jeep and is completely overgrown. The expedition had to cut and force its way through about 70 miles of this type of country.

February 13.—Broke camp from Dog Rock and tried to get through to George Rocks but road had to be abandoned after three miles of very rough travelling. Traveled to Kumari. Three hundred baits laid. Truck and Cooper stayed at Circle Valley while Bartlett and self took jeep with empty drums to Esperance.

February 14.—Obtaining supplies from Esperance and vulcanizing jeep tube.

February 15.—Return to Grass Patch with supplies and joined up with Cooper and the truck. Pushed on to Government tank 40 miles north-east of Grass Patch. No sign of dogs along this road.

February 16.—As it rained all night had difficulty in finding and clearing right road.

February 17.—Travelled to old Fraser Range Road and inspected first tank at Dingo Rock but only dog signs were very old ones. Kangaroos and emus plentiful. Truck bogged three times. Laid 100 baits.

February 18.—Travelled 31 miles along Fraser Road which was hard to find in places being badly overgrown. First dog scratchings seen since leaving Grass Patch. Laid 100 baits.

February 19.—Travelled 21 miles over burnt country with road difficult to follow. Found two dogs, kangaroos and camels watering at Clear Streak Well. Kangaroos plentiful and some rabbits. Old and new dog tracks seen along telegraph line road—three or four dogs had recently travelled east along this road. Laid 350 baits.

February 20.—Travelled 103 miles. Dingo tracks plentiful for about 30 miles along Balladonna telegraph line particularly in Lakes country. One freshly-killed kangaroo seen and stopped to poison carcass. No dog tracks seen since turning south towards Israelite Bay. Laid 700 baits along telegraph line.

February 21.—Travelled 24 miles east to springs and on to Muntadinla and Pinjardinla Rocks. One dog track and some old scratchings at springs. Plenty of water. Dogs and rabbits numerous. Too much needle grass in this country for dogs to run on. Three hundred baits laid.

February 22.—Travelled to Israelite Bay. Dingo tracks started at Junana Rocks along the road and tracks and scratchings numerous on the plains at Russell Range. Also right through to Israelite Bay. Saw a young dog on the sandhills. Rabbit, fox and dog tracks seen around sandhills and on the beach. Six dog tracks seen going east along the beach from the bay. Laid 800 baits.

February 23.—Dogs had been plentiful over area west of Israelite Bay. Three kangaroos seen and rabbits plentiful. General trend of dog tracks is eastward. One thousand three hundred baits were laid.
February 24.—Dingoes plentiful to Jenanullup Creek but none seen from there to Thomas River. Emus, kangaroos and rabbits plentiful at Thomas River, but no dogs. Laid 750 baits.

February 25.—Travelled 28 miles on old Mount Ragged road then travelled west and back to camp. Dingo tracks and scratchings over most of the plain and dogs had been watering on outcrops of granite at Boyatup Hill. Dogs seem to be keeping to the two-year-old burnt plain country rather than the thickly wooded Thomas River area. Probably this rabbit-infested area is visited at night by dogs. One emu shot and carcass poisoned. Laid 400 baits.

February 26.—Travelled through to Esperance. Dog tracks and scratchings plentiful at swamps 40 miles from Esperance where they were possibly attracted by water and newly-burnt country. Kangaroos more plentiful. Laid 700 baits.

February 27.—Travelled to head of Young River. Saw one dog track at Lort River and two along Vermiculite Road west of Young River. Kangaroos and rabbits plentiful. Laid 83 baits.

February 28.—Head of Young River inspected but this area not seriously infested with dingoes—I estimate only two dogs. One hundred baits laid here. At head of Munglinup River four dogs were seen and signs indicated six or eight dogs. They had bred there this season. Three hundred baits laid.

February 29.—Travelled to Ravensthorpe and laid 300 baits en route. Saw some dog tracks in the Oldfield River area.

March 1.—Ravensthorpe, Magenta, Pingrup Road. Dingo tracks plentiful—first soak dry. South of Long Creek two dogs were seen and one shot. Dog pads observed along creek and at a well where they had been obtaining water. Rabbits were plentiful and we saw 20 emus watering at 40 mile dam. Tracks of four dogs at the dam. Laid 350 baits.

March 2.—Travelled to dam west of Lake Magenta. No dog tracks through Magenta but one had been watering at dam. No dogs on an abandoned farm south-west of Magenta. Laid 400 baits.

March 3.—Both Sullivans and Greenshields soaks were dry. Only saw occasional dog tracks along road. No tracks at rock dam eight miles east of Pingrup. Laid 700 baits through this area of travel. This completed reconnaissance, and vehicles travelled to Katanning. Baits laid, 13,608.

DAMS ON HILLSIDES

A READER of the “Journal of Agriculture” recently wrote to the Commissioner of Soil Conservation concerning the current tendency towards sinking dams on hillsides. He stated that many farmers and contractors were throwing up holding banks in such a manner that a large percentage of the water impounded was lost by seepage under the banks.

The letter was referred to the Hydraulic Engineer, Public Works Department, who has commented as follows:—

“Where dams are constructed on sidling ground, it is the practice of this Branch to store water in bank to save excavation or alternatively conserve more water.

“Before the bank is commenced, the natural surface below where it will be is stripped of all growth, loose and/or sandy soil. This is done by dozer blade and the spoil pushed well out of the way. The depth of overburden removed depends on local conditions, but is rarely less than one foot. The exposed surface is then scarified by ripper or plough to a depth of at least six inches. Construction of the bank is then commenced. Excavation is usually done by tractor and scoop and the material is spread evenly over the bank in layers of about six inches. Where excavation is done by dozer, the material is similarly blended evenly and not left in heaps. Every effort is made to traffic the tractor and scoop over all the bank as many times as possible to assist consolidation, even to the extent of carrying the full load along the bank rather than taking the shortest track. These precautions materially add to the imperviousness of the bank.

“The slopes of the bank are roughly 2½ to 1 and a good top width, up to 10ft., if possible, is allowed. Usually there is ample material to make a good wide bank. Berms of up to 20ft are usually allowed although some dams have been constructed with only 10ft. berms. It is found that over the years, however, material from the banks is washed into the dams if the berms are too narrow.”

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