Wild dogs and dingoes in Western Australia

A R. Tomlinson
Department of Agriculture

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WILD DOGS OF W.A.
BASED ON BONUS PAYMENTS 1947-52
EACH DOT REPRESENTS 5 DOGS

Fig. 1.—Map showing distribution of wild dogs, according to scalp bonuses paid.
WILD DOGS AND DINGOES IN WESTERN AUSTRALIA

By A. R. TOMLINSON, Chief Vermin Control Officer

Wild dogs have presented a major problem ever since stock raising was commenced in Western Australia. While the intensity of the menace has moved outwards as settlement advanced, the problem is still acute in the outback and sufficiently serious within many settled areas to cause concern. It is felt that a review of the situation may assist farmers, pastoralists and others concerned by giving them a better idea of the extent of the problem, the manner in which the Government and other authorities are tackling it and some proposed future moves.

The first recorded figure for Government bonus payments in Western Australia was for 6,200 scalps paid for at 10s. each in 1923. These 10s. payments continued until a £2 bonus was instituted in 1928, following upon the creation of the Vermin Act Trust Fund in 1927.

In the 26 years from July 1, 1927, to June 30, 1954, 338,881 wild dog scalps have been received and payments from the Vermin Act Trust Fund have been £382,539. As indicated on Table 1, 15,342 scalps were received during 1927-28 while 10,260 were received in 1953-54, and the highest number was 19,694 in 1944-45.

Many thousands of pounds have been expended by Vermin Boards and primary producers in additional bonuses, losses in stock have been very costly (some properties have been abandoned as a result of sheep losses), while expenditure in poisons, traps and man-power has brought the total cost to millions of pounds.

**DISTRIBUTION**

Some idea of the distribution of wild dogs (the term is used to include dingoes, domestic dogs gone wild, or crosses of these two) may be gained from the map showing the average number of scalps produced for payment of the bonus each year over a recent five-year period. It will be observed that the greatest concentration is in the northern or Kimberleys area of the State; there is a further concentration in the North-West, which tapers away from the coast towards the South-East; with a further series of concentrations in the vicinity of the Nullarbor Plain, the Warburton Ranges and the Eastern Goldfields; and small numbers in the agricultural districts.

The dots have been shown in the districts of the local authorities which collected the scalps, and have been grouped within the limits of settlement or where it is known that doggers operate. For instance, the southern border of the dots in the Kimberleys and the eastern border in the North-West are the limits to which stations extend.

There are wild dogs beyond these limits as they will be found right to the border of Western Australia and beyond. For this reason, a map based on bonus payments cannot be expected to be completely ac-
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In the Eastern Goldfields (Kalgoorlie, Norseman, etc.), 5,577 scalps were produced in 1929, 409 in 1947 and 582 in 1954. In the Northern Goldfields (Meekatharra, Laverton, Yalgoo, etc.), 1,116 scalps were received in 1928, 470 in 1932, and 1,904 in 1954. The figures show a steady increase, mainly influenced by scalps from the Warburton Ranges Mission.

In the North-West (Ashburton, Roebourne, Upper Gascoyne, etc.), 994 scalps were paid for in 1928, 238 in 1932, 1,481 in 1952 and 1,298 in 1954. A heavy invasion from the east, plus some bad local breeding-spots, led to the big numbers in 1952.

In the section of the Northern areas including Marble Bar, Nullagine and Port Hedland, 218 were paid for in 1928, 82 in 1932, 1,146 in 1946 and 837 in 1954. The high figures for 1946 represented the aftermath of a heavy influx of dogs from the eastern desert, which over-ran many stations.

In the Kimberleys, 5,564 scalps were received in 1928, 13,889 in 1945 and 5,388 in 1954. Nine thousand one hundred and seventy-two scalps were paid for in the Hall's Creek district alone in 1945, comprising nearly half of the State total.
Fig. 4.—Aerial baiting of outback breeding areas checks wild dog invasion at the source. Sacks of prepared baits shown ready to be loaded on the aircraft at Balfour Downs Station.

The overall figures for pastoral districts are 12,093 in 1928 and 10,260 in 1954. The lowest was 6,303 in 1932 and the highest 19,288 in 1945.

DIFFICULTIES ASSOCIATED WITH CONTROL

The problem of effective control is subject to several difficulties, which include:—

(1) The breeding rate. Each pair will have a litter of five to six or even as many as nine pups a year. A small residual population can rapidly build up its numbers. As the parents endeavour to hide the litters in remote and inaccessible places, they are difficult to destroy. This aspect is part of the principles regulating animal populations which is generally recognised. Briefly speaking, there is normally an average population of any wild animal which persists despite violent fluctuations due to disease, seasonal conditions and many other factors. The average population is controlled by many things, among the chief being availability of food, living space and breeding grounds.

The net result is that, the more violent the interference with this average population, the stronger is nature's endeavour to return to the average level. By an artificial population reduction the breeding rate is increased and the natural mortality rate is reduced by the lack of competition for food and living space.

This principle must be recognised, as it explains largely why, although large numbers of wild dogs are destroyed, the general population level may remain the same. Increase in food, by the presence of rabbits or sheep, will also increase the average population level.

Destruction of dogs before or after they reach settlement means reduced losses of stock. However, permanent reduction of the wild dog populations requires reduction of their food supplies (which is unlikely in settled areas), destruction of breeding and living habitats by the advance and intensification of settlement, or destruction measures which consistently destroy the dogs faster than the breeding rate. Excellent examples of control through destruction work were given in the South-West corner and the Midlands area to the north of Perth, where continued heavy baiting by Government doggers reduced the wild dog populations to a minimum. When the baiting was relaxed the wild dog numbers increased.

(2) Migrations, emigrations and other movements: While, once they settle in an area, wild dogs normally have regular main dens or hide-outs, they are constantly moving and patrolling over their hunting grounds, which may extend over a considerable distance. They move away from these haunts and range far and wide when mating and return for whelping. They also
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migrate with seasonal conditions and follow the movements of game. There is also fairly conclusive evidence of emigrations, sometimes on a large scale, over long distances, usually following particularly harsh seasonal conditions.

It is hoped to confirm the exact extent of these emigrations by tagging, but there seem to be repeated southerly and westerly movements from the drier inland districts into settlement. Some of the main routes, which observations indicate are followed, are shown on the accompanying map. One, starting in the Warburton Ranges near the central east border of the State, goes through the Nullarbor Plain to the south of Kalgoorlie and eventually to Mt. Many-peaks near Albany. It is unlikely that any single dog traverses this 900-mile route, but there is a series of connected staging and breeding localities along which the southerly and westerly movement of the dogs appears traceable. The wild dogs seem to favour certain well-defined travelling trails, usually following water supplies and breaks in the country which make travelling easier. Some are natural routes, such as the one already mentioned originating from the Warburton Ranges. Others are along man-made trails, such as the Canning Stock Route, originating in the East Kimberleys and reaching Wiluna and the motor "road" from the Warburton Range Mission to Laverton. (Of course, these man-made trails would also be following suitable travelling routes.) When cattle are driven down the Canning Stock Route, their arrival at Wiluna is usually followed by an invasion of wild dogs into the surrounding country.

In addition, evidence has accumulated of other regular infiltrations of wild dogs into settlement.

(3) Domestic dogs: There is always a steady drift of domestic dogs to swell the ranks of the wild dogs. They are town dogs, station or farm dogs and natives' dogs, which may have been well-behaved domestic dogs during the day, but savage blood-lusting killers at night. Unless detected by their owners, most of them go completely wild eventually. Some mate with other domestic dogs while others cross with dingoes, adding to the problem. An interesting example is in the coastal areas immediately to the north of Perth, which is completely surrounded by settlement so that there can be no infiltration by dingoes. Most of the wild dogs here are typical domestic dogs. "Kangaroo dogs" (a stag-hound like type) are prominent.

The extent to which cross-breeding continues is a matter of much conjecture. It is reasonably certain that domestic dogs and dingoes mate and litters are produced. It has been suspected, but not proved, that cross-breeding continues with the progeny although close inquiries and investigations

![Fig. 5.—Refuelling the baiting aircraft at Ashburton Downs Station.](image)
have failed to reveal any known instances. It has now been fairly well established that many suspected crosses are in fact pure dingoes with variations in colour, size, length of fur, etc. Mr. C. K. Blair (the Government Vermin Control Officer in charge of dogging operations in pastoral districts) reported the natives in the Warburton Ranges as describing three distinctively marked and varying sized classes of dingoes with different habits.

(4) Cattle Stations. Although there is ample proof that wild dogs kill and injure calves (one dogger found the remains of eight calves killed by dogs near a pool), most cattle station owners are uninterested in control work. Many do not agree that wild dogs do any damage to cattle, while others, who agree, do not think their losses are sufficiently serious to justify any special action. As a matter of fact, one reliable northern cattleman recently reported that wild dogs destroyed 96 out of 100 calves in one mob of his cattle.

Extreme difficulty is encountered in persuading cattle stations to take any effective action against dogs. In the North-West and the Eastern Goldfields, where cattle and sheep stations are adjoining, it is difficult to organise district-wide destruction drives for this reason.

With the exception of an area along the Fitzroy River to the south-west, the Kimberleys are given over to cattle raising. It is here that possibly the greatest problem in wild dog control is encountered. The attitude on many cattle stations is that the wild dogs are not a menace and that the bonuses are a profitable side-line for station hands and others. Few of the cattle stations carry out any organised control measures by poisoning and what dogs are destroyed are shot or trapped for the bonus. As a result, the area might be described as a gigantic natural dog farm. It is significant that 5,338 of the 10,260 dog scalps produced in 1954 (over 52%) came from the Kimberleys.

The Kimberley dog population is isolated from the rest of the State geographically and it has been suggested that, as some of the vermin boards and stations are disinterested in control, payment of bonuses and other assistance should be stopped in this area. However, this would react unfavourably on the sheep stations and no doubt the Northern Territory would suffer from an increase in scalp payments.

THE BONUS SYSTEM

There is mounting evidence that the bonus system has been a costly failure. It may seem paradoxical that a system which results in many scalps being produced should be condemned, but such is the case. Any scheme which encourages destruction methods which will lead to a bonus, rather than destroying the pests to eradicate them, must fail. Bonuses substitute commercialisation for eradication and do in fact lead to vermin “farming.”

The main arguments against the bonus system are:

(a) The aim is to obtain the bonus instead of to destroy a maximum number of pests. Methods which will lead to the recovery of carcasses, such as trapping and shooting, are used in preference to mass destruction, such as wholesale poisoning, in which many carcasses will not be found.

(b) Property owners are inclined to leave it to the bonus to remove their pests and neglect systematic destruction work.
(c) Unless a very high bonus is paid, professional hunters will not operate. On the other hand, the higher the bonus, the greater the concentration on individual animals and also more malpractices arise. Where high bonuses have been offered in restricted areas, scalps have been smuggled in from many miles away. Government doggers have met with open hostility in some places where their poisoning operations have threatened wild dogs on which high bonuses are being paid.

(d) Bonuses lead to a type of "vermin farming." There are many examples of this, including the practice of pup catching without destroying the parents. Annual visits are paid to regular pupping places to catch the pups while great care is taken to leave the parents unharmed. In other places, dogging operations cease during the breeding period in order that pregnant females will be unmolested. In certain areas, where breeding places are near and well known, all destruction measures have been aimed at the overflow, leaving the main reservoir untouched.

(e) In the University of California publication "Control of the Coyote in California," by Joseph Dixon (1920), the author says "The bounty system is, at its best, well nigh futile; this is well illustrated by the Coyote Act of our own State which went into effect March 31, 1891, and was suspended September 30, 1892, after 187,485 dollars had been expended and little had been accomplished. It is the opinion of those who have made a study of this question that the bounty system is not only vastly expensive and productive of endless fraud, but that in no known case has it given any general or permanent relief."

In "Modern Methods of Predator Control" by Dorr D. Green, Chief, Branch of Predator and Rodent Control, U.S.A. Fish and Wildlife Service (1951), it is stated: "A number of recent experiences have demonstrated more clearly than before that bounties are seldom an effective and efficient method for promoting predator control."

These statements have been supported by opinions given by leading authorities and our own experience.

**APPROACH TO WILD DOG CONTROL PROBLEM**

For many years the payment of a bonus was considered the main means of controlling wild dogs in Western Australia. This largely entailed shooting and trapping.

The official approach has been undergoing changes to a more positive attitude over the years and it is hoped that all landholders and interested organisations will eventually be educated to a similar understanding of the situation. Many are already keen supporters.

**General Policy.**

The general policy is to encourage wholesale baiting of dogs in remote breeding areas as well as in and around settlement. It is considered that, to be really effective, the baiting should be organised by vermin boards in district-wide simultaneous drives in which all concerned by the problem should participate. Vermin boards should employ men to organise such drives as well as doggers to actually assist landholders. These drives should be assisted by trapping and shooting of difficult dogs on properties, the destruction of pups during the "pupping" season and aerial baiting when warranted.

![Fig. 7.—Dale's Gorge Creek in the Hamersley Ranges, photographed from the baiting aircraft.](image)
Protection Board Doggers.

To assist local authorities and landholders in controlling wild dogs, the Agriculture Protection Board is employing 40 doggers—24 in the pastoral areas and 16 in the agricultural areas. Those in the agricultural areas are under the immediate direction of a Vermin Control Officer stationed in the country. In the pastoral areas supervision is decentralised by having Vermin Control Officers stationed in the Kimberleys, the North-West and the Eastern Goldfields under the direction of a senior officer, who is directly in charge of vermin control in pastoral areas.

The doggers concentrate on the destruction of wild dogs in the more remote and difficult breeding and hunting grounds away from settlement. They have large territories to cover and, in order that the most effective use is made of their services, they are not allowed to operate on occupied holdings although they may give advice and certain assistance.

Their work is wholesale baiting by either carcass-poisoning or the distribution of unlimited numbers of small baits. Trapping and shooting are limited to assisting the main poisoning programmes.

Protection Board Trappers.

As a means of direct assistance for landholders and vermin boards where wild dogs are causing damage and their destruction is beyond the skill of local people, the Agriculture Protection Board authorised the employment of expert trappers. Their services are to be available on a charge to cover the actual costs of employing them and they will operate on occupied holdings or elsewhere as required. Any farmers or pastoralists requiring these experts should apply through their local vermin boards.

Up to the time of writing (1954), two such trappers had been obtained for the agricultural areas, but none for the pastoral areas.

Farmers, Pastoralists and Vermin Boards.

The Government doggers are operating at about the peak of their efficiency within the limitations of men and finance available. It is clear that any further improvement in the overall situation rests with farmers and pastoralists, who are responsible for destroying dogs on and about their properties, and vermin boards, which have a duty to ensure that dogs are destroyed throughout their districts. The only way the vermin boards may do this is by the employment of inspectors to supervise and organise wild dog control work and to employ doggers to assist the landholders.

Aerial Baiting.

Distribution of baits from aeroplanes is being used by the Agriculture Protection Board as an extension of ground baiting by doggers. The main projects are being conducted in the North-West and Eastern Goldfields pastoral areas in October and May. Other projects are being commenced to the east of the Great Southern agricultural areas.

The baiting is carried out in areas which are too remote or inaccessible for ground operations. Breeding grounds, wateri...
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places and routes leading to these localities are the main targets. Although the inaccessibility of the areas makes assessment of results difficult, observations made where possible have revealed that this form of baiting is achieving its purpose.

Baiting with Poisoned Baits.

Baits made of meat—preferably fatty meat—are very effective in control work. Baits about an inch cube containing at least half a grain of alkaloid strychnine (one-third of a grain is the lethal dosage), if distributed wholesale, will be successful. Brisket fat has been found very suitable and, for the aerial baiting, millions have been imported from Queensland, where they are prepared by salting and boiling. Each contains a half-grain alkaloid strychnine tablet and is wrapped in paper for preservation.

![Fig. 9.—This cave in the South Stirlings contained three pups. Note the lamb's leg in foreground.](image)

**Baiting by Carcass Poisoning.**

The Government doggers are achieving spectacular successes with carcass baiting. Carcasses of animals such as kangaroos and sheep are cut into sections, and strychnine powder—either alkaloid or soluble—liberally inserted in long cuts. Large kills (including one of 13 dogs) from single carcasses have been obtained and the advantage, as far as doggers are concerned, is that the dogs will usually remain in the vicinity of the carcasses until they die so that their scalps are easily secured. In many instances, carcass baiting has been the means of destroying particularly cunning dogs which have been difficult to trap.

**Trapping.**

Some individual dogs have been found very difficult to bait and trapping has been found necessary. The jaw of the trap must always be poisoned with strychnine to ensure that dogs do not die a lingering death or escape. Some skill is required in trapping and it is not advisable for anyone to undertake this means of destruction without some training. Otherwise there is a danger of a dog being "educated" so that it becomes "trap-shy" and very difficult to destroy.

**Shooting.**

A good marksman should always be armed when wild dogs are about. A .303 rifle is the most suitable.

**Fencing.**

Fencing has been found a very effective safeguard against wild dogs and some stations or farms could not have been carried on without "dog fences." The ideal dog-proof fence is 6ft. to 6ft. 6in. high, made of rabbit netting surmounted with larger mesh netting or closely laced wires. The top should lean outwards.

However, much lower fences have been found to be good safeguards. The South Australian dog fence is 4ft. 3in. high, while various stations and farms with rabbit fences increased to heights such as 3ft. 7in., 3ft. 6in., 4ft., 4ft. 10in. regard them as dog-proof. The West Australian vermin fences, which are 3ft. 10in., undoubtedly divert dogs and, where dogs have crossed, it is usually as a result of damage or gates left open.

No doubt dogs in pursuit of game or being chased would leap a fairly high fence or possibly a domestic dog running wild might have been trained to do so. Normally wild dogs would not jump a fence of over 3ft. 6in. in height. It is of interest that, where a dog leaps a fence, it is usually a male. Bitches endeavour to scratch underneath.

**General Destruction Programme.**

While destruction work should be undertaken whenever necessary, there are certain periods most favourable or important.
Possibly the most favourable time is from October to January, when the pups are moving about, but are sufficiently inexperienced to be easily baited. The early part of this period coincides with the driest time of the year in most of the pastoral areas. During this period the dogs concentrate on watering places and are easy victims.

The mating period in the autumn just before the winter rains is another favourable time as the dogs are moving about and are less cautious than normally. Once again, they are concentrating near water. Immediately after the first rains they scatter and, although still vulnerable, are more difficult to find. However, this period is undoubtedly one of the most important in the programme as any destruction, particularly of bitches, curtails the potential population.

During the pupping season, which follows, an excellent opportunity is provided for destroying litters before they become killers.

Undoubtedly the most important time to destroy dogs is in the mating and breeding seasons, although possibly this is not the most favourable time.

**FUTURE PROGRAMMES**

While much investigational and research work is required, the better understanding of wild dogs and their habits is already leading to improved control measures.

**Changes in Policy Required.**

Generally speaking, it is considered that it will be essential to change from the limitations of the bonus system—even to abolishing the bonus—to a system of coordinated and organised control work extending over districts and groups of districts. Unless it is decided to introduce a system of centralised control, working in conjunction with local authorities and landholders (which is the most promising solution), no great progress will be obtained until vermin boards generally combine and organise drives throughout their districts.

Already the A.P.B.'s dogging scheme, with supervision in the hands of vermin control officers stationed in convenient centres, has laid the foundations for centralised control. Co-operative drives have been organised by these men and the ready support of landholders obtained.

**Doggers.**

The dogging scheme has been of estimable benefit to pastoral and agricultural industries. The assistance and protection afforded by these men must have saved many thousands of pounds in stock production. The scheme should be maintained with as many men as finances will permit. The employment of doggers by vermin boards, to work with our men, would greatly assist.

**Aerial Baiting.**

Aerial baiting has an important place in any future scheme. Penetration to many remote places may be achieved only from the air. Intelligent combination of aerial baiting with ground operations is essential.

**Investigations.**

Research and investigations are to be continued, the more important phases being:—

(a) Expeditions to obtain further knowledge of the distant inland breeding areas, routes by which wild dogs emigrate to settlement and the reasons for these movements.
(b) Tagging to trace the movement of dogs and the distances they travel.

(c) Improved techniques to enable more effective destruction during the vital mating and breeding periods which offer the most favourable opportunity for ultimate successful control.

(d) Improved poisons and trapping devices. Investigations are being conducted into promising new poisons, such as the fluorines, including sodium fluoroacetate ("1080") and sodium fluoracetemide. Supplies of "cyanide gun" traps have been obtained for testing purposes.

(e) Cross-breeding of domestic dogs and dingoes to prove conclusively that this does occur and to ascertain to what extent any progeny will breed.

Domestic Dogs.

While domestic dogs are so freely available to swell the ranks of the wild dogs, experience has shown that control is almost impossible. It is felt that it may be necessary to devise some way of ensuring that no one is permitted to have more dogs than can be effectively maintained and that any surplus are destroyed before they “go bush.” It has been suggested that the registration fee should be increased, particularly for females. Special consideration could be given to those who use dogs in their occupations or are registered breeders.

General.

No doubt the most successful answer to our wild dog problem is the destruction of habitats and breeding places by the advance and intensification of settlement or regular attention by hunters. While there are places where wild dogs may mate and breed (and it must be remembered this includes domestic dogs running loose), the complete extermination presents many difficulties and the aim must be effective control. This will be achieved only by well organised and co-ordinated work by the Agriculture Protection Board, local authorities, farmers and pastoralists.
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