

INCIDENCE OF CALVING AND BIRTH WEIGHTS OF DOMESTICATED BUFFALO IN THE NORTHERN TERRITORY

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Summary

One hundred buffalo were caught on the eastern side of the Adelaide River; within ten to fourteen days of capture, all animals became docile and amenable to handling.

It was found that most domesticated buffalo cows calved during the wet season months. Birth weights for 21 calves and growth rates for a few animals to 12 months of age are presented.

I. INTRODUCTION

When rice cultivation experiments were commenced on Humpty Doo Station on the west bank of the Adelaide River, about forty miles (65 km) from Darwin, in 1953, by the Northern Territory Administration, the water buffalo (*Bubalus bubalis* L.) was regarded as a potential problem. It was believed that the buffalo had seriously damaged large areas of country by both trampling and over-grazing, and that in many areas the buffalo numbers were excessive. It was thought that the buffalo was wild and unmanageable and could play no part in any future developmental projects in the north and that for these reasons it should be exterminated to make way for cattle. In addition, the buffalo hide industry had collapsed and there was no market for buffalo beef. There had been one attempt to utilise a few animals by converting the carcasses into fertiliser, but there was little outlet then for the fertiliser.

With these facts in mind, a study of the water buffalo was commenced in mid 1958. One aspect of this work was to domesticate some animals and study their behaviour in captivity.

II. MATERIALS AND METHODS

Buffalo were caught for domestication on the northern portion of Marrakai (at Horn Billabong) in September 1958 and at Dirty Water Billabong on Woolner, about ten miles north of Horn Billabong (Figure 1) in October 1958. A total of 100 animals of both sexes and of various ages from young calves to aged cows and bulls was caught, and within ten to fourteen days of capture all animals were docile and could be handled with ease.

Because of the inaccessibility of both Woolner and Marrakai during the wet season, 50 animals (16 bulls, 25 cows, 9 calves) were transferred to Beatrice Hills, on the western side of the Adelaide River, in November 1958. The remaining 50 were studied in the area of capture.

At Beatrice Hills, the animals were run on indigenous pastures and no supplements were given except that when the area was eaten out the animals were fed

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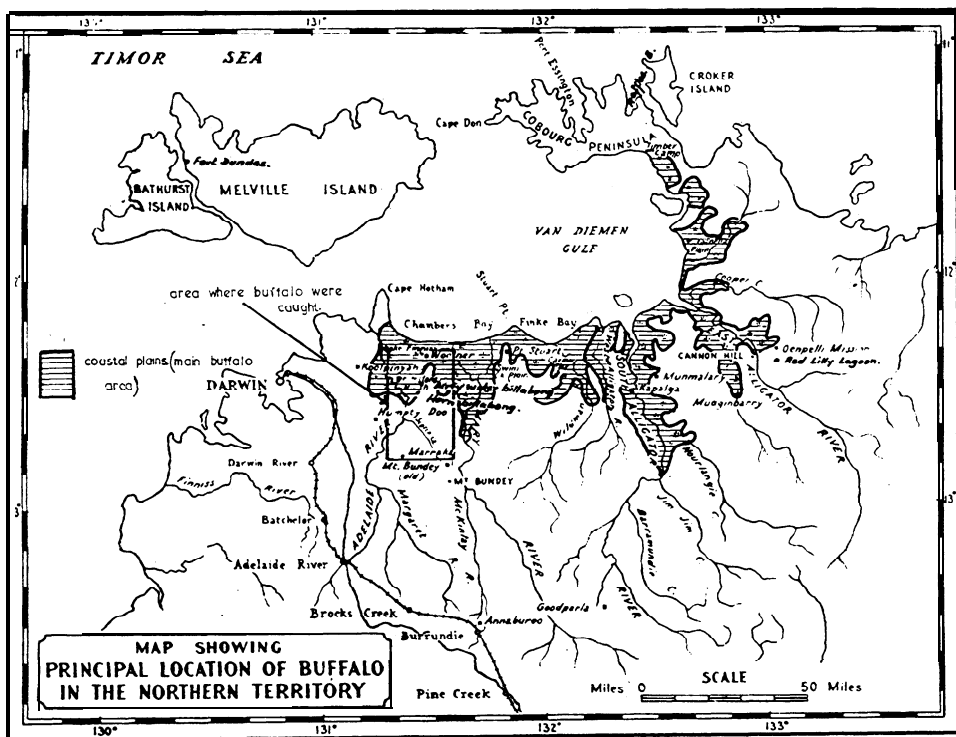


Fig. 1. — Location of Buffalo in the Northern Territory

baled rice straw containing 1 to 2 per cent protein. The bulls were allowed to run with the cows continuously.

Records were kept of the date, sex and birth weight of each animal born. Calves were also weighed, where possible, at monthly intervals up to twelve months, and again at twenty-four months.

III. RESULTS

It was found that most of the calves were born during the wet season months. (Figure 2.)

When the calves were born, the cows were very difficult to handle and it was impossible to yard them. It was found that it was more practicable to weigh the calf at two days of age, rather than at birth; at two days the mean weight with standard deviation of 21 calves was 30.8 ± 3.0 kg.

The calves were weighed at monthly intervals until 12 months, and again at 24 months. Table 1 records these weights.

IV. DISCUSSION

In the present study, most of the calves were born to the domesticated buffalo cows during the wet season months or early in the dry season. Work in other countries also indicates a seasonal breeding pattern in buffaloes (Hafez 1952). In the Philippines and India, maximum sexual activity occurred in autumn (August-November or January), while in Bulgaria it occurred in autumn and winter (October-March). This seasonal breeding in the Northern Territory is fortuitous for both the cow and the calf, for there is an abundance of water and green feed when most

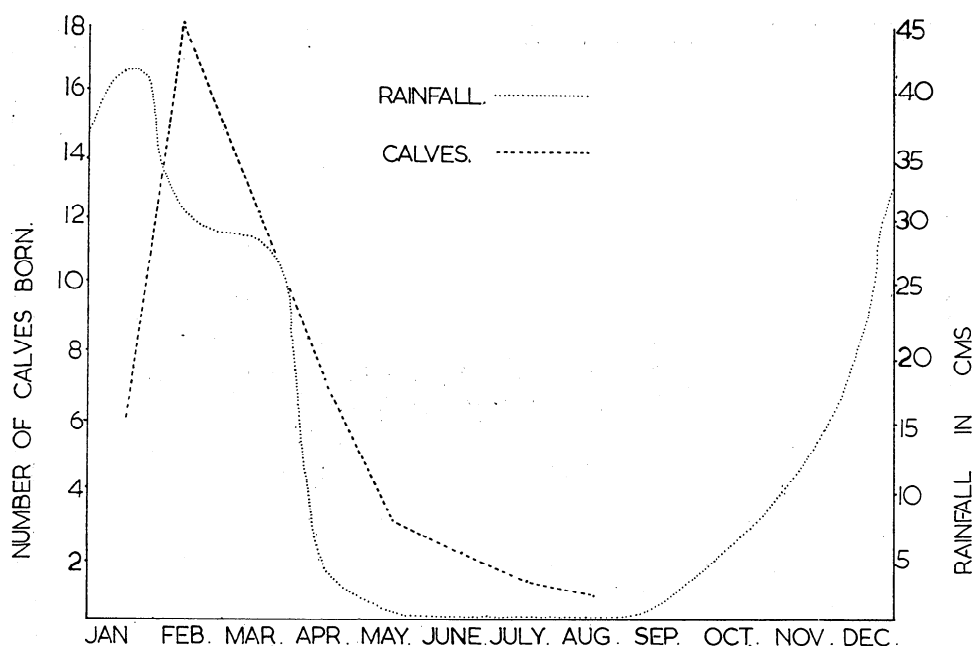


Fig. 2. — Distribution through the year of rainfall and of calving in a herd of 25 buffalo cows running continuously with the bulls.

calves are born, but the reason for it is not clear. Recent work with domesticated buffaloes in the Northern Territory has indicated that cows can calve at any time of the year so there is apparently no decisive physiological barrier to breeding at a particular season. Further studies are in progress.

In the work reported here, the weight of the calves at twelve months of age compares favourably with that of the “unimproved” cattle in the northern portion of the Northern Territory; in most instances cattle calves are lighter in weight than are buffalo calves of this age. On the other hand, tropical breeds of calves or cross-bred calves grazing on improved or partly improved pastures are heavier than buffalo calves of the same age, but it should be noted that every effort was

TABLE 1
Monthly Buffalo calf weights

Birth Weight	Weight (kg) of calves from 1 to 24 months of age												
	1	2	3	4	5	6	7	8	9	10	11	12	24
29.9	52	69	82	98	114	122	134	151	165	194	215	233	376
29.0	49	68	78	92	106	116	120	131	148	173	191	224	336
27.7	46	57	68	80	91	100	110	125	154	172	201	228	383
27.0		68	90	No weighings after third month									
31.8		86	112										
32.2		83	102										
27.2		77	100										

Feeding on indigenous pastures then baled rice straw (1-2% protein) when area eaten out.

made to ensure that the domesticated buffalo and their calves grazed indigenous pastures similar to those grazed by undomesticated animals, and only when the area was eaten out were they hand-fed.

In areas where buffalo and cattle are running together during the dry season (and particularly towards the end of the dry), it is common to see the buffalo in good condition while the cattle are very poor. During the dry season of 1959, when the work reported here was in progress at Beatrice Hills, twenty local Northern Territory cattle were running in a paddock adjoining that in which the buffalo were grazing. These became so poor that they had to be hand fed daily with hay and other supplements. In contrast, the buffalo calves increased in weight while the older animals maintained their weight.

The Animal Industry Branch of the Northern Territory Administration has, between 1960 and 1965, carried out a series of experiments to determine the susceptibility or otherwise of buffaloes to pleuropneumonia. Young buffalo are very resistant to this disease, while old animals showed lesions resulting from pleuropneumonia with hepatisation and "marbling" followed by fibrosis. Most animals showed evidence of recovery as the experiment progressed. (A.I.B. report, 1964-65). Tuberculosis is prevalent in buffaloes, with an incidence of up to 25 % being reported (A.I.B. reports). No information is available on internal parasites.

Experimentally, buffalo will carry a heavy tick infestation (R. H. Wharton, pers. comm.), but of the many thousands of buffalo seen at abattoirs, in yards and on the plain, ticks have been found on only ten very poor animals, and in no case were there more than ten ticks per animal. Ticks have never been found on healthy animals.

The Buffalo fly (*Siphonia exigua*) is very common throughout the "buffalo country". However, by wallowing and thus coating itself with mud, the buffalo is given some protection from attack by these insects.

Despite the few animals used in this study, the results suggest that in certain areas of the Northern Territory the water buffalo, particularly the domesticated animal, could be a useful addition to the economy.

V. REFERENCES

- Animal Industry Branch Reports, N.T. Administration, Darwin, N.T.
HAFEZ, E. S. E. (1952). *Indian J. vet. Sci. Anim. Husb.* **22**: 257.