

## SOME RECENT NOTES ON BUTE MAMMALS

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**Introduction**

In 1970 I published a paper in the Buteshire Society's *Transactions* on the mammals of the Island of Bute (7). This 1970 paper was actually the first separate account of Bute mammals ever to appear, and it was later followed by two supplementary papers (1976, 1980) to keep the records of our Bute mammals up to date (11, 14). The comprehensive *Atlas of Bute and Cumbrae Vertebrates* (15) was also published in 1980, in recognition of the 75th anniversary of the founding of the Buteshire Natural History Society, and this detailed *Atlas* gave individual maps showing the 10-kilometre square distribution of all vertebrates — mammals, breeding birds, reptiles, amphibians, and freshwater fishes — on Bute and the Cumbraes, historically from 1800 until the date of publication.

These three published papers, plus the *Atlas*, together form a solid foundation on which all later work on Bute mammals can be based, and during the immediate past ten years there have certainly been some interesting and important changes in the status of Bute mammals. As one would expect, changes in the mammal status are seldom as numerous or as frequent as those which take place with birds, but on the other hand, when changes do take place with mammals, especially with land mammals on an island, these changes usually tend to be long term. Successful introductions tend to remain, and any extinctions are seldom replaced naturally.

In this respect, during the past ten years, among the terrestrial mammals Bute appears to have lost the Water Vole but gained the Mink, which not everyone would regard as a good exchange. I have been unable to trace any further records of the Badger or Red Squirrel, but on the credit side Otters are still present and may even be increasing. There are many more records of the Water Shrew and the Bank Vole, and although this almost certainly represents increased observation rather than any genuine increase in population, nevertheless it is very satisfactory to be able to confirm that both of these species are well established on Bute. On the other hand, Roe Deer have undergone a very substantial increase in population, and steps are being taken to keep the numbers of deer under some control. Rabbits have also increased very substantially within recent years, but here the natural control of myxomatosis will presumably soon take effect once again.

With regard to the marine mammals, seals do haul out on to the shores of Bute but the whales and dolphins are confined to the

surrounding seas (with the exception of the occasional stranding), and here there have actually been some marked changes. The long-established relative positions of the Common Seal and the Grey Seal within the Clyde area were virtually reversed within a decade, with the Grey Seal now far and away the commoner species. Common Seals are now quite rare in some of their previously well-known Clyde haunts, and indeed Bute is now one of the few places in Clyde where the Common Seal still occurs with any real regularity. Porpoises are returning slowly, but the Common Dolphin has significantly increased, from one of the rarest Clyde dolphins to one of the best known, and in numbers it now rivals the White-beaked Dolphin. On the other hand, the Bottle-nosed Whale, formerly so well known, is now distinctly uncommon, and has been easily overtaken by the Killer as the commonest large cetacean in Clyde.

Any changes in the status of Bute marine mammals largely reflect more widespread changes which have taken place among the marine mammals of the entire Clyde sea area. Land mammal changes, however, are peculiar to the Island of Bute itself and have no particular relevance to the neighbouring landward areas of Clyde.

To the best of my knowledge, the following notes include all significant changes which have taken place in Bute mammals during the past ten years, i.e. since the publication of the last (1980) supplementary Bute mammal paper (14) and the *Atlas* (15), but they also draw attention to some other species where additional information has recently come to light about previous status.

Over the years, when collecting information on Bute mammals, I have been extremely grateful to a large number of people — many friends and colleagues in the Buteshire Natural History Society, plus farmers, gamekeepers, poachers, fishermen, estate workers, and many others — all of whom unfailingly passed on any interesting items of information they discovered. My best thanks are also due to Mr James B. Simpson, Bute Estate Factor, for enabling me to obtain a great deal of very useful information from the Estate staff. As always, I am extremely grateful to the Marquess of Bute for many things, in particular for affording me ready access to the Bute Estate archives and for permitting the resulting information to be published.

### Systematic List

In the following Systematic List the arrangement and nomenclature follow *A World List of Mammalian Species* by G.B. Corbet and J.E. Hill, second edition (1986), published by the British Museum (Natural History), London.

### Order INSECTIVORA

#### HEDGEHOG *Erinaceus europaeus*

Although the population 'explosion' (14) following the Hedgehog introduction to Inchmarnock in 1972 has long since settled, Hedgehogs do still occur on Inchmarnock in small numbers.

#### WATER SHREW *Neomys fodiens*

On several occasions during the past ten years specimens have been trapped at the Beaver Wood, north of Kilchattan Bay, where there is clearly a small viable population. Specimens have also been trapped near Straad, and dead specimens have been reported from several other places on the island.

It is now clear that the Water Shrew occurs widely, if somewhat locally, in most places throughout the Island of Bute where there is suitable habitat.

#### MOLE *Talpa europaea*

The Mole remains common and widely distributed throughout Bute, but it is possibly worth recording that mole-hills have been seen near the top of Suidhe hill, near Kilchattan Bay, at about 500 feet, and on the hill-slopes above Shalunt, in the north of Bute, at approximately 750 feet.

### Order CHIROPTERA

#### LONG-EARED BAT *Plecotus auritus*

An excellent view was obtained of one seen flying on Inchmarnock in June 1984. This is apparently only the second positive record for Inchmarnock (14), but presumably the Long-eared Bat occurs regularly on Inchmarnock, as does the Pipistrelle, since both occur commonly on Bute and bats have often been seen flying between Bute and Inchmarnock (7).

### Order CARNIVORA

#### AMERICAN MINK *Mustela vison*

In my 1980 paper on Bute mammals (14), when commenting on Mink swimming from Arran to Holy Island (26), I wrote that it was "not inconceivable that Mink could reach the Island of Bute by natural means at some future date". Unfortunately this is now the case.

During 1981 I received several unconfirmed reports of Mink having been seen in the north of the island. One was killed by a car on the road to Rhubodach in April 1982, and later that year several more were

reported from various places in the north. In 1983 several Mink were trapped, and it soon became clear that Mink were beginning to spread rapidly.

By 1985, Mink were being reported from all over the island. In that year, over sixty Mink were trapped by Bute Estate staff, and comparable numbers have been trapped since then. The position now is that Mink are well established all over Bute, as indeed they are in virtually all parts of the Clyde area, and are likely to continue to increase steadily in keeping with the available food supply.

Whether Mink reached Bute by natural spread over the Kyles from Cowal, or were deliberately introduced, or escaped from a clandestine attempt at Mink farming, will probably never be known. The Mink population on the Cowal mainland near the Kyles is not very high, but evidence from other parts of the country shows that it is not necessarily density of population which causes Mink to strike out for new areas. Needless to say, any evidence about the origin of the Mink on Bute will be gratefully received.

#### POLECAT *Mustela putorius*

It seems to be necessary to re-assess the early status of the Polecat on Bute. Thomas Pennant, in his *Tour in Scotland and Voyage to the Hebrides, 1772*, visited the Island of Bute (21) and recorded "The quadrupeds of the island are hares, polecats, weasels, otters, seals, and as a compliment to the soil, moles".

Pennant was a good reporter, and apart from a tendency to confuse the Wild Cat and feral cat, very understandable in the late eighteenth century, his statements on animals are usually reliable. We can therefore accept that the Polecat occurred on Bute in the 1770s, but John Blain, writing shortly before 1820, said that the "fulmart . . . had been early exterminated" (4). This gives additional confirmation that Polecats formerly occurred on Bute, but the early date of extermination is rather surprising.

With the upsurge of interest in agriculture, and the widespread establishment of gamekeepers, which took place in most parts of Scotland around the 1830s, the Polecat underwent a rapid decline. It was the most easily trapped of all the carnivores, so the end came quickly, and it was extremely rare throughout Scotland by the mid-1800s (13). On the Island of Bute interest in agriculture may have come somewhat earlier, and indeed there is some evidence for this (25), so the attack on the Polecat and other apparent predators might also have commenced much earlier than elsewhere on the neighbouring Scottish mainland,

which could explain the Polecat's apparent extinction on Bute by around 1800 or thereby.

To the best of my knowledge there are no later records. The 1890 Bute specimen reported by Hugh Boyd Watt (27) was presumably an escaped dark Polecat-Ferret.

#### FERRET *Mustela putorius furo*

Ferrets escape all the time and may live in the wild state for several years, so if a pregnant Polecat-Ferret escapes, the resulting litter may well give the impression of feral breeding. On the Island of Bute, however, I have had no evidence of genuine feral breeding for many years.

As previously reported (14), on Inchmarnock several Polecat-Ferrets escaped in 1977 and 1978 and quickly established a small feral breeding colony. Young Ferrets were certainly seen until 1982, and an adult was seen in 1984, but I know of no later evidence. This, however, is not to say that Ferrets are no longer present on Inchmarnock. In some places the vegetation is exceedingly dense, and on day-visits, which is the most I have managed during the past five years, some animals could perfectly well be present but not be seen. Two dead gulls were found with obvious throat injuries in 1986, which is possibly some tenuous circumstantial evidence. Any additional information will be most gratefully received.

#### BADGER *Meles meles*

In an attempt to throw some light on the origin of the previous records of the Badger on Bute (11), during the past ten years I made extensive enquiries of farmers all over the island as to whether they had any knowledge of Badger setts anywhere on their farms, but entirely without success. As previously reported, no other records of Badgers are known to the Bute Estate gamekeepers or to any member of the Buteshire Natural History Society, so we must conclude that the Badger is now genuinely absent from Bute.

Escaped pets are the usual explanations for bizarre occurrences, but Badgers are seldom kept as pets, so the origin of the two Badgers previously seen and found dead on the island (11) therefore remains unknown.

#### OTTER *Lutra lutra*

I am glad to say that the population of Otters appears to be well maintained, with regular reports from many parts of the island. The recent revival of Mink on Bute does not appear, at least so far, to have had any effect. The Otter is more than capable of holding its own.

## Order PINNIPEDIA

COMMON SEAL *Phoca vitulina*

During the past fifteen years the population of Common Seals in the Clyde area has decreased quite alarmingly (16). This decrease was very marked long before the seal disease of the past two years, although this worsened the position and many Common Seals died.

Some of this decrease could be explained locally by interference from the oil-related developments at Ardyne and Portavadie, so that the formerly well-known gatherings of seals near Toward, and breeding sites on the islands in lower Loch Fyne, completely disappeared (12). Elsewhere in the Clyde area, however, where there has been no apparent interference, e.g. Lady Isle, Arran, south Kintyre, there has also been a marked decline in numbers, and the Common Seal is now relatively uncommon throughout Clyde.

One of the few areas where Common Seals can still regularly be seen at some of their traditional sites is actually the Island of Bute, where Common Seals still occur off the Hermitage in the east, off Ardscaipsie in the west, and on Inchmarnock, with occasional sightings at other places. There has certainly been a decrease in numbers, but nothing like the decrease experienced in some other parts of Clyde, where Common Seals are now entirely absent from some formerly traditional sites.

I can offer no real explanation for this apparent special position of Bute, but a regular watch should certainly be kept to see whether the current Common Seal population is maintained. A watch should also be kept to see whether any breeding takes place (e.g. on Inchmarnock) following the seal disease of the previous two years.

GREY SEAL *Halichoerus grypus*

By contrast with the Common Seal, within the past fifteen years the Grey Seal, once quite rare in Clyde (12), has become widely and commonly distributed throughout virtually the entire Clyde sea area (16), and the population has increased quite dramatically. Grey Seals are now regularly seen along most suitable shores of Clyde, including much of the Kintyre coast, Ailsa Craig, Arran, Bute, several of the smaller Clyde islands, and far up the great sea lochs, e.g. Loch Fyne, Loch Striven and Loch Long. In the past, Grey Seals have bred on Little Cumbrae in 1958 (17), on Holy Island from 1969 to 1972 (10), and are now breeding regularly at a certain site in south Kintyre (16).

On Bute itself there is now a regular gathering of Grey Seals at Garroch Head, present in varying numbers throughout the year, and Grey Seals can commonly be seen offshore at many places around south Bute, off Rhubodach, down the west Kyles, and in lower Loch Fyne.

Another regular gathering is near the north-west point of Inchmarnock. So far I have no evidence of any breeding, but a look-out should certainly be kept for this each autumn.

In summary, the relative positions of the Common Seal and the Grey Seal in the Clyde area during the past century have been almost completely reversed within the past fifteen years (16), and the Island of Bute appears to be one of the few areas of Clyde where the Common Seal still retains its former status.

## Order CETACEA

COMMON DOLPHIN *Delphinus delphis*

Another very dramatic change in the status of a Clyde marine mammal has been the vastly increased number of sightings of the Common Dolphin (15, 16), which now certainly rivals the White-beaked Dolphin as the commonest Clyde dolphin.

Every year for the past ten years I have seen Common Dolphins jumping somewhere in the Clyde, mainly in Kilbrannan Sound, between Ailsa Craig and Arran, in lower Loch Fyne, and in the Sound of Bute (16). In December 1982 a Common Dolphin was actually seen jumping in Princes Dock, in the centre of the city of Glasgow (24). From the shores of Bute and Inchmarnock I have seen Common Dolphins jumping in the Sound of Bute and off Garroch Head. This is a remarkable change in status.

WHITE-BEAKED DOLPHIN *Lagenorhynchus albirostris*

Although still fairly well known, during the past ten years there has certainly been a decrease in the number of sightings of the White-beaked Dolphin. This dolphin can still be seen jumping in offshore Bute waters, but with the increase in the Common Dolphin sightings the observed numbers of each species are now more or less equal, and it will be interesting to note future developments.

KILLER WHALE *Orcinus orca*

There has been a steady, indeed relentless, increase in the number of Killers during the past twenty years (12), and the Killer Whale is now far and away the commonest large cetacean seen in Clyde waters (16). The Killer is particularly common in the Kilbrannan Sound, where I had the good fortune to see a pack of nearly forty Killers in May 1973, and in lower Loch Fyne (12).

It is interesting to record that one of the earliest sightings of the Killer in the Clyde area was made off the west coast of Bute on 5th June 1898 (20). Over the past fifty years I have seen a steadily increasing

number of Killers in Clyde (12), and I now see some from the shores of Bute virtually every year (7, 16). Most Bute sightings are off Garroch Head and in the Sound of Bute, but on more than one occasion I have seen Killers in the west Kyles. To the west of Inchmarnock, and in lower Loch Fyne, off Ardlamont, the Killer is well known.

#### PORPOISE *Phocoena phocoena*

The Porpoise is certainly returning to the Clyde sea area, although not as yet in anything like the numbers of former years. Nevertheless, I have several recent sightings off Garroch Head and in the Sound of Bute, and, although just on the fringe of our area, in June 1987 a school of over twenty (substantial nowadays) was seen in Loch Striven, to where Porpoises had previously shown signs of returning (18). I shall be glad to receive information on any recent sightings from the shores of Bute.

#### BOTTLE-NOSED WHALE *Hyperoodon ampullatus*

Although formerly by far the commonest large cetacean seen in Clyde, and Bute, waters, with a good number of sightings each year and numerous strandings reported over the past 200 years (12), the Bottle-nosed Whale has recently undergone an extremely marked reduction in population, with very few sightings at all during the past fifteen years.

Formerly I used to see Bottle-nosed Whales not infrequently from the shores of Bute, mainly off Garroch Head and in the Sound of Bute, and it was very well known elsewhere in Clyde, particularly in the Kilbrannan Sound and in lower Loch Fyne, but I have had no Bute sighting for ten years and very few indeed from elsewhere in Clyde. The Bottle-nosed Whale has long since been overtaken by the Killer as the commonest large Clyde cetacean (16), and reports indicate that the Bottle-nosed is now an uncommon whale off most parts of Britain. This is a remarkable change.

#### Order ARTIODACTYLA

##### ROE DEER *Capreolus capreolus*

There is no doubt that the population of Roe Deer on Bute has been substantially increasing over the years, and is now vastly greater than it was some thirty years ago (7). Roe Deer are by no means confined to the wilder or more wooded parts of the island, but are now also exceedingly well-known visitors to gardens, even well within the town of Rothesay. The attitude of the residents of the island remains somewhat ambivalent. On the one hand there is understandable exasperation at the rapid disappearance of flowers and vegetables from the gardens, especially when one looks out of the window and sees a deer contentedly feeding,

but on the other hand there is delight at the sight of such a beautiful creature so close at hand. Requests to the Bute Estate to come and remove the deer are usually accompanied by a plea "but don't shoot them"!

In an attempt to keep the Roe Deer population under some control, a regular annual cull has been carried out over the years, and in a determined cull during the past year 68 bucks and 43 does were shot on the island by Bute Estate staff. This compares to a yearly average of some 35 deer shot during the late 1950s (7, 13), and gives some indication of the size of the population increase.

To the best of my knowledge no precise attempts have been made to assess the total Roe Deer population, but on the assumption that in the course of last year's cull the Estate managed to shoot twenty per cent of the available population (reckoned to be a reasonable estimate), this would give an island population in the region of 500 beasts, i.e. an average of some three deer to every square kilometre, a figure at which no Bute gardeners would express the least surprise.

##### WILD GOAT *Capra hircus*

The last count I was able to make (1986) showed about fifteen animals in the north herd, which is now the only herd of feral goats left on the island (11). This number is probably satisfactory, although it remains to be seen what effect the increased afforestation in the north of the island will have on this little herd over the forthcoming years.

#### Order RODENTIA

##### RED SQUIRREL *Sciurus vulgaris*

As with the Badger, during the past ten years I made extensive enquiries of the Bute Estate gamekeepers and of farmers all over the island as to the presence of any Red Squirrels (11), but all my enquiries met with a negative response. Nor have any Squirrels been reported to me by any members of the Buteshire Society. It seems, therefore, that the Red Squirrel is now completely extinct on Bute.

##### BANK VOLE *Clethrionomys glareolus*

During the early 1980s I repeated some live-trapping of small mammals with Longworth traps in suitable areas in the south of Bute, largely centred on Kilchattan Bay. It is worth recording that I caught Field Voles and Bank Voles in virtually equal numbers when trapping in appropriate areas, mainly around the edges of woods, thus confirming the Bank Vole's previously known status on the island (7, 9) as fairly common locally.

WATER VOLE *Arvicola terrestris*

It is only too clear that the Water Vole has very substantially decreased on Bute, and indeed it is my belief that it may now even be extinct, so it is worth giving a summary of its known history.

According to E.R. Alston (1872, 1880) and Hugh Boyd Watt (1905), my immediate predecessors in the study of Clyde mammals (1, 2, 27), there were no Water Voles on any of the Clyde islands. It is also interesting to note that Barrett-Hamilton and Hinton (3), in their survey of West Hebridean islands carried out during 1912, recorded no Water Voles from the Clyde islands. This survey, however, was largely concerned with the small mammals — mice and small voles — and, as I have found myself, the Water Vole is not a species which readily lends itself to trapping by the methods one usually has available for other voles, so trapping results are not always a good guide, and one ideally has to rely on continued observation over a substantial period of time.

For this, of course, one usually has to be resident on a particular island, as was L.P.W. Renouf on the Island of Bute in 1919, and it is to Renouf, later to become Professor of Zoology at Cork University, but at that time Curator of the Bute Museum, that the credit must go for first discovering the Water Vole on any Clyde island.

Renouf found Water Voles on Bute, but in his 1919 paper to the *Glasgow Naturalist* (22) he said he had "very few records" and only one record of the dark form *reta*, commonly found in the highland part of Clyde.

The Rev. J.M. McWilliam, who spent many years on Bute as parish minister until the early 1930s, and ultimately became Honorary Vice-President of the Buteshire Natural History Society, was an ornithologist of considerable distinction who published, amongst other things, the well-known book on *The Birds of the Island of Bute* (19). As well as this, however, he also collected considerable material on Bute mammals, and he passed his entire notes over to me some years before he died (7). McWilliam also found Water Voles on Bute, and knew them to be "reasonably common in the right places" (9), although somewhat local in habitat.

From the early 1940s onwards I myself saw Water Voles quite regularly at several places on Bute (7, 9), in particular at Plan Loch, Quien Loch, the Straad (Quogach) burn, Ettrick burn, and occasionally elsewhere. I also live-trapped several specimens, in baited standard spring-loaded box rat-traps, and later released them.

Within more recent years, however, I began to see fewer and fewer Water Voles on Bute, and indeed in the mid-1970s I realised that I had

not seen a live Water Vole for many years, only dead specimens at the Plan Loch in May 1972 and in August 1975, so I reported this decrease in my 1976 Bute mammal paper (11). After this I had no positive records of Water Voles, only a few exasperatingly brief tentative sightings, and have had no records of any kind for the past ten years, despite recent determined searches.

There has therefore been a dramatic decrease in the Water Vole population on Bute, but why? Domestic or industrial pollution of streams, such as is found so often on the mainland, is apparently not a real problem on Bute, but agricultural pesticides in farming country everywhere have been finding their way into local streams in increasing concentrations. This may therefore have started the decline, with what was probably always a somewhat localised population, and the recent arrival of the voracious and competitively aquatic Mink, which may well have been present on the island for much longer than was originally thought, may have completed the damage to an already diminished and weakened Water Vole population. The few remaining Water Voles may simply have been unable to cope.

It is distressing to have to record, therefore, that the Water Vole may now have become extinct on Bute, and, needless to say, I shall be extremely grateful to anyone who can supply me with recent positive information to the contrary.

## Order LAGOMORPHA

MOUNTAIN HARE *Lepus timidus*

As previously noted (11), Mountain Hares were introduced to the Island of Bute, probably around the 1860s (5), but apparently soon died out and there are no later records.

As far as I am aware, this is the only genuine reference to the Mountain Hare on the Island of Bute, but in the *Scottish Naturalist* for 1920 (23) Mr John Robertson gave a note on a Mountain Hare seen on the shore near Ascog Bay. This, however, does not refer to the well-known bay on Bute and is a misprint, or possibly an older alternative spelling, for Asgog Bay at Ardlamont, Argyll, near the entrance to Loch Fyne. Robertson actually makes the locality fairly clear in the text.

I previously pointed out this possible error (8), but since I have recently heard it mentioned as an authentic Bute record, I now draw attention to it again simply to dismiss it.

RABBIT *Oryctolagus cuniculus*

Although periodic local outbreaks of myxomatosis usually keep the Rabbit population under some control, within the past few years there

has been a very marked increase in the Bute Rabbit population, which at present is probably greater than at any previous time during the past quarter-century. By the nature of events, however, it is likely that a large outbreak of myxomatosis in the fairly near future will once again rapidly reduce the population.

### Order MARSUPIALIA

KANGAROOS and WALLABIES Family *Macropodidae*

RED-NECKED WALLABY *Macropus rufogriseus*

Although I previously gave some detailed notes about the third Marquess of Bute's late-nineteenth century kangaroo and wallaby colony (7), I was unable to give any indication of the size of the colony, and oddly enough nowhere in the Bute Estate archives could there be found any mention of the number of animals which had been kept. This lack of information was surprising and also very unfortunate, since it deprived us of a vital piece of evidence in the history of this interesting introduction.

Very fortunately, however, it is now possible to get at least some idea of the colony size. Miss Catherine Armet, formerly Archivist to the Bute Estate, very kindly continued to do a great deal of work on my behalf by searching all relevant documents, and quite unexpectedly found a set of accounts from the end of last century which showed the quantities of fodder purchased for the kangaroos. With Lord Bute's permission I sent all the details to London Zoo, who replied saying that this, very approximately, represented food for a colony of somewhere in the region of forty animals. This suggestion seems not unreasonable, and is probably the best indication of numbers we are likely to get.

It is also likely that the breeding stock of the colony consisted almost entirely of Red-necked (i.e. Bennett's) Wallabies. This is the species mentioned by far the most frequently in the Estate records and correspondence, and also appears to have been the species most commonly imported at that time for such collections. The few other species were probably isolated specimens added to the collection out of interest.

It is still difficult to establish when the wallaby colony came to an end. The third Marquess died in 1900, and some of the direct interest in exotic animals may have died with him. No accounts for fodder appear to exist after 1900, which may mean that the colony was not maintained after that date, or may simply mean that such documents were not considered to be worth retaining. It turns out that Downie (1934), to whose book (6) I previously referred (7), had obtained his information

from McWilliam (1927), whom he then obviously quoted, but without acknowledgement. McWilliam himself (19) simply referred, in passing, to a conversation he had with Mr Robert Gordon, Head Gamekeeper, and the suggestion that the Wallabies were turned out to fend for themselves "about fifteen years ago" (written in 1927) was clearly not meant to be an exact date, but was merely a recollection by Mr Gordon of an event 'some years previously'. All the contemporary information I have been able to obtain indicates an earlier date. As has been suggested, it seems most likely that maintenance of the wallaby colony ceased a year or two after the third Marquess's death, i.e. around 1902 or thereby.

As to whether any feral breeding took place after the wallabies had been turned out to fend for themselves, this possibility may not be so far-fetched as it at first seemed. There is now a well-known colony of wallabies breeding ferally in the Peak district of England (13), and Bute has a very suitable climate. After my 1970 paper was published (7), I received several communications from elderly residents of Bute who had family recollections of both old and young wallabies existing on the island for some years, but, although most interesting, this by itself does not prove feral breeding.

McWilliam (1927, p. 120) quotes a delightful story obtained from Mr Gordon, which is well worth repeating (19). After the wallabies had been turned out:

One lived on its own resources for about three years, and when Pheasants were being driven at Mount Stuart this kangaroo was frequently seen to emerge in front of the line of beaters, heading the drive.

I was told that there had been occasional references to the wallabies published in the *Buteman*, some time between the turn of the century and the start of the first world war, including one announcing the 'last of the Bute kangaroos'. Unfortunately no-one could give me an exact reference, and no cumulative index to the *Buteman* appears to exist in sufficient detail. I have done what I can in the way of searching back years of the *Buteman*, but with limited time available I have had no success so far. I shall therefore be very grateful indeed to anyone who can provide me with any more precise information.

In summary, therefore, it might not be too far from the true facts to suggest that the Bute wallaby colony was established in the early 1870s, consisted largely of Red-necked Wallabies, and was artificially sustained, with successful breeding in captivity — up to some forty animals — until just after 1900. After this the remaining animals were turned loose, and

some lived in the wild state, possibly with some feral breeding, until a few years before the first world war, when the remnants of the colony either died or were shot out.

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