

PALMATE NEWT *Triturus helveticus* (Razoumowski)

Fairly common on Sanda, where it has been recognised since at least 1920 (*Scot. Nat.*, 1921, page 21) when J. B. Henderson, the lightkeeper, sent three specimens to William Evans. I have found no other species of newt on Sanda, and to the best of my knowledge there are no newts on Sheep Island.

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CLYDE SEABIRD DISASTERS — A HISTORICAL
SURVEY

By J. A. GIBSON

During the last week of September 1969 there was a considerable wreck of seabirds (mainly auks) on the Ayrshire coast of the Clyde, and shortly afterwards reports were received of other sizeable wrecks from the coasts of east Ireland and north Wales. From the accounts which appeared in the popular press the average bird-watcher could be forgiven for assuming that this was an unusual, or even a unique, event. This is not so. A knowledge of the history of Clyde seabirds shows that similar disasters have occurred several times during the past hundred years, so it seems desirable to examine these disasters in some detail, and if possible to correlate them with the steady decline in the seabird population of the Firth of Clyde.

Almost the entire Clyde breeding population of seabirds, apart from gulls, stems from Ailsa Craig, a justly famous colony, but as I have shown elsewhere (*Scot. Nat.* 63: 73-100, 159-157) the present population is a mere fraction of what it was a hundred years ago. The great reduction in population appears to have affected mainly the auks — the puffin, the guillemot and the razorbill, and there is no real indication that the populations of the other seabirds have ever fluctuated very much. No accurate contemporary account exists of the seabird population a century ago, but by various means we can get some approximate indication of previous numbers. The original puffin colony appears to have been enormous. Even a modest estimate, based on the acreage which historical evidence shows to have been occupied, gives in the region of a quarter of a million birds in the 1860s, whereas the colony is now virtually extinct, with at best only a few dozen birds left. The eggs of guillemots and, to a lesser extent, razorbills were formerly systematically collected for sale, and fortunately the records of these collections have been kept. Comparing these records with the present known populations on the same cliffs shows that the guillemot population alone has decreased from some fifty thousand pairs about 1900 to less than five thousand pairs at the present day.

Man formerly collected the puffins for food, the guillemots and razorbills for feathers, and the eggs of the guillemot for sale — indeed one hundred years ago it was

for this purpose that the Craig was rented, but there is no good evidence that the activities of man made any serious impact on the seabird populations. What then is the reason for this enormous decrease? The eclipse of the puffin is easily explained, for rats got ashore from a wreck in 1889 and from then on, as with so many other seabird colonies, the puffin's doom was sealed. The only puffins now remaining on Ailsa nest on inaccessible parts of the cliffs. What of the guillemots and razorbills? History shows that guillemots and razorbills in the Clyde have been subject to periodic natural disasters, sometimes of quite gigantic proportions. Moreover, within modern times the bird-kill effect of floating oil on auks has steadily increased, sometimes with quite disastrous results. More recently another type of pollution, less obvious but possibly more sinister than oil, has appeared. There seems little doubt that it is the cumulative effect of these disasters, both natural and man-made, that has decimated the guillemot and razorbill population of Ailsa. The significant years have been 1859, 1872, 1889, 1913, 1941, 1948, and 1969. Other smaller and more localised wrecks have occurred from time to time, but are not discussed here.

1859:

In September 1859 there was "excessive mortality amongst the seabirds of the Firth of Clyde, Belfast Lough, and several other places chiefly in the West of Scotland." This occurrence was well documented at the time. The original account appeared in the *Proceedings of the Natural History Society of Glasgow* vol: 1 p. 2-4, and Robert Gray in his *Birds of the West of Scotland* (1871) gives an admirable summary from which it is well worth quoting the following excerpt:

"I may here refer to a very extraordinary mortality which occurred among the sea-fowl of the Firth of Clyde in September 1859, and which at the time attracted considerable attention from local naturalists. The principal victims of this epidemic, if such it may be called, were the puffin, guillemot, razorbill, and common gull. The razorbill perished in extraordinary numbers, being found in the proportion of ten to one of the other species. From information communicated to the Natural History Society of Glasgow by one or two of the members, it would appear that the mortality had set in about the time of the birds leaving Ailsa Craig and the breeding places off the coast of Ireland, and that during the few intervening weeks they had probably, from a diminution or entire absence of their usual

food, fallen into a low condition favourable to the development of disease to which they ultimately succumbed. They were all found much farther up the firth than usual, as if in search of food, many birds being obtained even at Renfrew and other places, in waters at a distance from the sea. In these situations they darted eagerly at any food which came in their way, rushing at baited hooks on a hand line, and otherwise exhibiting a tameness more like the result of starvation than actual disease. They were all in a wasted condition, being reduced almost to skin and feathers, and were found dead or dying in thousands over a wide extent of sea, from the mouth of the river Clyde to the Irish coasts, the master of one of the mail steam packets having reported that he sailed his ship through miles of floating carcasses."

Attempts to estimate the size of a disaster occurring so long ago are very difficult, but the description given by Gray is very graphic, particularly the last sentence about miles of floating carcasses. If these accounts are accurate, and all the indications are that this is so, then the numbers of birds killed would appear to have been in the region of ten or possibly even twenty thousand. After enquiry by the Natural History Society of Glasgow it was believed that the disaster "was attributable to extreme scarcity of food, causing an emaciation resulting in death."

1872:

In 1872 large numbers of razorbills were apparently cast ashore dead on both the English and Scottish coasts. There seems to have been a fairly large mortality in the Firth of Clyde, but it was remarked that other species were not involved in the way they had been in 1859 (*Proceedings of the Natural History Society of Glasgow*, volume 2, pages 181-182). The mortality was apparently nothing like so large as that experienced in 1859, and discussions at the time could not apparently explain the occurrence. Since it had been "confined exclusively to one species, it was not easy to account for its existence." This wreck may not have been of enormous significance numerically, but in view of the fact that it was more or less confined to razorbills, the population of which has always been very considerably less than guillemots, it may have been of some local significance for the Clyde, and Ailsa in particular.

1889:

The 1889 wreck would appear to have been of considerable magnitude. My information about this is derived entirely from the late Captain Archie S. Girvan, the Grand

Old Man of Ailsa Craig, and the last of the Craig professional bird and egg collectors (see obituary in *Glasgow Bird Bulletin*, volume 3: 72). A few preliminary words of explanation are necessary.

During most of the last century the main industry of Ailsa Craig was collecting seabirds, mostly auks, for their feathers which were sold commercially. Indeed it was for this purpose that the Craig was rented to the Girvan family, who also derived considerable income from the sale of guillemot and razorbill eggs. The birds were collected from the cliffs with huge nets, and the eggs were collected by men climbing down the cliffs on traditional pathways and seldom using ropes, such as was done at other seabird colonies, e.g. Bempton. It was a poor year that did not yield 1,000 dozen eggs.

Captain Girvan clearly remembered that the year he left school and joined his father for the seabird and egg collecting, there was an enormous wreck of dead and dying auks, mostly guillemots, all over the sea between the Craig and Girvan. This was in the early autumn, after the birds had left the cliffs and the family had 'harvested' them. For two weeks there was intense activity in the family — out on the sea in rowing-boats collecting auks during the day, and plucking them all night. The men collected the birds and the women and children plucked, as was the usual practice. Captain Girvan remembers how proud he was to be accepted as grown-up, and to be in the boats. In previous years he had only been a 'plucker' when the birds were brought from the Craig. In a normal year the auks were collected on the Craig and were brought across to the mainland for plucking every few days, but towards the end of the 1889 wreck the whole family had to join in plucking, so great was the rate of gathering the guillemots from the sea.

Such an unexpected happening was of immense economic importance to the Girvan family, and indeed was to alter their entire way of life. At the time there was considerable celebration, but the following year vast areas of the Craig cliffs were almost entirely denuded of auks and the return from feathers and eggs was extremely low, so much so that the family turned to fishing and purchased their first fishing boat largely with the extra money made from the seabird wreck of the previous year. The main source of family income now changed from bird collecting to fishing. Birds were never again netted for feathers, although egg-collecting as an additional source of revenue continued until the first world war. This wreck, therefore, meant that the young Archie Girvan had only one season

actually netting birds on the Craig, and from then on went fishing with his father.

When I asked about numbers Captain Girvan at first said he really had no idea, but that he himself had lifted literally hundreds of dead auks out of the sea into the boat every day, others in his boat were doing exactly the same, and there were several family boats doing entirely this for a week or so. On reflection he said there must have been 50,000 birds plucked. This may seem an exaggeration, but the circumstantial evidence of the time spent on collecting, and the subsequent alteration in the family fortunes — a most important point, indicates a wreck of simply gigantic proportions. It should also be remembered that the auk population of Ailsa Craig now is only a fraction of what it was then, and looking at all the available evidence it seems not impossible that at least 25,000 birds might have been involved, possibly many more. Captain Girvan also said that nearly all the birds were very wasted, indeed some were just skin, bones and feathers. He had, of course, been plucking auks for many years as part of the family business, and well knew the feel of a healthy bird.

I was surprised to find no mention of this wreck in the local natural history journals of the time, and I asked about this. Captain Girvan, however, said the family regarded this unexpected harvest of birds, which they assumed all came from Ailsa, as family property, so they warned everyone else off pretty firmly and kept quiet about it. This is not surprising, since it was indeed the family's livelihood. The wreck may have been very localised; most were gathered at sea before they came ashore; and the speed with which the dead birds were collected was no doubt also a factor. At any rate, clearly a gigantic wreck did take place, and was kept very quiet indeed, presumably for strong financial reasons, as Captain Girvan suggested.

The date may not be entirely accurate. Captain Girvan was precisely clear about all the details of the wreck, but no written record was kept. He was able to date it because he knew this was the first year he was big enough to help his father at the bird nets on the Craig — the year he left school. From then on he collected eggs on the Craig and went fishing with his father, but never again saw the bird nets in use. Working from the date of his birth the year should be 1889, although it may have been 1888.

Unfortunately I was unaware of all this when I wrote my survey of the seabirds of Ailsa (*Scot. Nat.*, 63: 73-100, 159-177, 64: 61). It was only when Captain Girvan read the account of the 1859 and 1913 events in his reprint of my Ailsa Craig paper that he realised my obvious interest in

the great wreck that so altered the fortunes of his family. I am grateful to Mr. Ian Girvan, Captain Girvan's son, for allowing me to publish this account of his father's recollections, much of which is private family history, and for providing many additional details.

1913:

Although not a 'seabird disaster' in the usual sense, the events of 1913 are certainly worth recording. In that year Ailsa Craig was almost completely deserted by guillemots and razorbills, the numbers of which had been noticeably less during the two previous years; puffins and kittiwakes had also decreased (*Scot. Nat.*, 1913: 235-236). This was at first thought to be due to extensive naval gunnery practice in the Clyde, but razorbills and guillemots were also found to be much reduced on St. Kilda and Rathlin where there was no gunfire (*Scot. Nat.*, 1913: 260), and to be present in normal numbers in the Firth of Forth (*Scot. Nat.*, 1913: 236) where naval gun practice was much in evidence. Failure of food supply was suggested as the reason for the decrease.

Captain Girvan well remembered 1913 — the year before the war. Guillemots and razorbills were seen floating in small numbers in many parts of the Firth, but nowhere near the numbers of the 1889 disaster, and certainly not enough to explain their complete absence from the Craig, which was much discussed at the time as a local mystery. Since auks no longer had any commercial value they were left floating on the sea and were not examined, so there is no evidence as to whether they were emaciated, as in the previous wrecks.

It was reported in the *Scottish Naturalist* (1914: 289) that the guillemots and razorbills, as well as the other seabirds, returned in full force the following year, and I quoted this in my Ailsa Craig survey. This, however, was an error, presumably due to the observer's lack of experience of the previous Craig position, for Archie and James Girvan later told me that although guillemots and razorbills did come back in considerable numbers, the total population was greatly reduced and never again approached the previous level. Indeed 1913 saw the end of commercial egg-collecting on Ailsa. Admittedly the war put an end to many practices, but the Girvans were all quite adamant that even without the war egg-collecting would have ceased. With the considerably thinned auk population, egg-collecting on a commercial scale was no longer profitable in view of the time expended and the risks involved. From then on the Girvan

family business on the Craig was directed almost exclusively to quarrying the granite.

1941:

In mid-September 1941 I found large numbers of dead seabirds, nearly all guillemots, on the Ayrshire coastline from Barassie to Troon, and later found others at Ardrossan and Prestwick. I counted several hundred myself, and heard that there were others further south. Unfortunately at that time I was still at school, without the means for getting swiftly all round the Clyde; moreover, bird-watching was not then the wide-spread hobby that it is now, and anyone I did know was away on war service, so I had no-one else to consult. The best I could do was to write to as many lighthouses as I knew to be functioning, and I did receive some kindly replies, but no records of dead auks. From the very limited information I could gain, the dead birds appeared to be confined to the Ayrshire coast and possibly some two thousand (little more than a reasonable guess) were involved.

I brought some specimens back and exhibited them at the next meeting of the local Natural History Society. Some older members expressed the view that the birds were very wasted, but the significance of this was lost on me. At the time there was considerable naval gunnery practice in the Clyde, and I was convinced that my guillemots had been killed by shells. I even wrote a letter of complaint to my Member of Parliament about this, and actually received a courteous reply, expressing regret and saying that the matter would be investigated! Looking back with hindsight I can see that my teenage indignation, although righteous at the time, was very misplaced. The activities of the Royal Navy continued all through the war, but only in one year did I find dead auks. Clearly I should have listened to the older and wiser counsel about starvation or disease.

Very much later I heard from James Fisher, who at that time was doing pioneer work on the gannet population of Ailsa Craig, that in 1941 the Ailsa gannets took a plunge in population, but rose again the following year (see *J. Anim. Ecol.*, 12: 173-213). This is very interesting but may well be coincidental.

1948:

Between the two world wars oiling incidents in the Clyde became more and more frequent, and the death rate of the auks on Ailsa Craig steadily increased. Archie and James Girvan, tenants of Ailsa Craig, always said they

could trace a steady decline in the Ailsa guillemot population to the effects of oiling. Oiling incidents were particularly bad during the 1940s, but the year 1948 was the worst on record. The summer had been very warm so the large stretches of floating oil did not get broken up by heavy seas. I could see one enormous oil slick, well over a mile long, coming steadily up the firth and on 22nd August it reached the Craig. On 23rd August vast numbers of oiled guillemots came ashore overnight. From the south foghorn to the jetty (a distance of about half-a-mile) I counted over 850 badly oiled guillemots on the beach. There were many hundreds floating just a little way out at sea, and many hundreds more around the coast-line. All would certainly die, and this represented almost a quarter of the total Craig population. The effect of this mortality was very marked in 1949, and many previously thriving cliff-colonies were almost deserted (see *Scot. Nat.*, 63: 97-98, or Fisher and Lockley, *Sea-Birds* 1954, p. 108). By 1950, however, the guillemots had made some sort of recovery. Fortunately there has been no major oiling disaster on Ailsa since then, although a small but steady trickle of oiled birds comes ashore most years.

During the 1939-45 war years many ships were sunk in the Firth of Clyde owing to enemy action, and this often led to extensive oiling. Details of these were frequently suppressed at the time, and it is no longer possible to obtain accurate details, but Jimmy Girvan clearly remembered that following the sinking of one large warship oiled guillemots and razorbills came ashore in very large numbers all round the coast of the Craig. He estimated that there were certainly several thousand birds. In numbers this incident may have approached the 1948 disaster, which possibly totalled somewhere in the region of five thousand old and young birds.

1969:

After a gale in the last week of September 1969 large numbers of seabirds came ashore on the Ayrshire coast. Large wrecks were also quickly reported from the Irish Sea and north Wales, and smaller wrecks were reported from other parts of west Britain. After seeing these Ayrshire birds I 'phoned round other parts of the Clyde area and made a quick trip round the Clyde myself, but as far as I could make out the major wreck in the Clyde area appeared to be almost entirely confined to the Ayrshire coast, and to extend in quantity no further north than Fairlie. Numbers of dead seabirds were scattered round the shores of Argyll, Arran, Bute, Cumbrae, and even Renfrew and Dumbarton, but nowhere in numbers comparable to the Ayrshire

disaster. I myself made only an approximate assessment of the total numbers, since this was apparently being done by the S.P.C.A. — later quoted in the press as about 7,000 to 8,000 birds, which seemed to me about correct, but I did examine several hundred specimens. As far as I could see at least 75 per cent. of the birds were auks, nearly all guillemots, but with a small proportion of razorbills and even a few puffins, and the rest a fairly equal mixture of the common Clyde seabirds. Nearly all were dead when first seen, and only a few showed any marked traces of oiling, although a sizeable oiling disaster (estimated at 1500 birds) had been reported from the south Ayrshire coast a week previously. The most significant fact to me was that well over half the birds I handled were wasted to a degree, some extremely so. In the past twenty-five years I have handled literally thousands of guillemots in the Clyde area, but some of these 1969 birds were as emaciated as any I had ever seen. It is worth recording, therefore, that prior to the wreck guillemots had been seen right in amongst ships in several Clyde harbours, apparently fairly tame, and picking up food thrown overboard; in my experience this is extremely uncommon for the Clyde.

I understand that specimens were gathered and sent off to various centres for examination, but from reports I have read it appears that these birds were largely in good condition. If this is true it is most unfortunate, and may have arisen from an understandable but misguided attempt to send the 'best' specimens, but it will not be an accurate sample. I have no doubts whatever that the great majority of the birds I handled were significantly wasted, and this, coupled with the behaviour of the guillemots in the harbours before the wreck, made me think at once of starvation. The wreck received considerable publicity in the local and national newspapers and in the week following the disaster my telephone was red-hot, but the gentlemen of the press did not seem to be much interested in a statement that the event appeared to be largely due to a combination of natural causes. If I was not an upholder of the poison gas, radioactive waste etc. theory, it seemed that most of the press simply did not want to know!

It was later reported that very high levels of PCBs (polychlorinated biphenyls — a waste product of industry) had been found in many dead birds, and this is extremely interesting. If birds are weakened by natural events such as moult and shortage of food, then disease or toxicity from contamination may be the last straw. So far I have not heard if anyone is prepared to say that the PCB level alone could

have caused death. Possibly the only way to be absolutely certain would be to check the PCB levels of healthy, breeding guillemots collected from Ailsa Craig next year. This is a distasteful prospect, which I don't much relish doing, but if necessary it may have to be done. Perhaps we will never be completely certain, but when all the evidence is collected I suspect it will point to a combination of natural factors, probably with a contamination overlay. The 1969 Clyde wreck appears to have been a relatively small affair compared to the enormous disasters of last century, but in view of our greatly reduced auk populations nowadays it may prove to be of considerable importance. Information about this 1969 wreck is being gathered and a catalogue of the results will be published in due course. The purpose of this account is not to discuss the 1969 wreck in detail, but rather to let its place in local seabird history be seen in its true perspective.

In summary, it seems to me that, quite apart from the effects of oiling, there has been an 'event' of varying severity, involving the death or absence of auks in the West of Scotland (and sometimes other parts of the country), every 25-30 years for as far back as records have been kept, and that emaciated birds, presumably but not necessarily due to starvation, have been a fairly common feature. It may be that these large and sometimes enormous disasters have always been part of the natural history of our seabird populations, and as such were acceptable, until the additional effect of man-made pollution made its impact. It would now seem, however, that this combined attack is too much for our present auk population to sustain, and I greatly fear that auks will disappear from Ailsa Craig in my own life-time unless this additional hazard of man-made pollution can be removed.

It would be most unwise to read too much into history, and to assume that there is something 'cyclical' about these incidents, but it would be equally unwise to ignore the lesson of history altogether. I would not go so far as to say I expect to see another seabird disaster towards the end of this century, but if one does happen, and I am still around to see it, I shall not be unduly surprised. If man-made pollution continues on its present scale, however, any such forecast becomes entirely academic, since I cannot see sufficient seabirds being left for any wreck to be formed. Time will tell.

ADDITIONAL MAMMAL NOTES FROM THE ISLAND OF ARRAN

By J. A. GIBSON

These additional notes on the mammals of the Island of Arran are supplementary to my paper in the last volume of the *Transactions of the Buteshire Natural History Society*, volume XVII, pages 59-68, 1969.

Order INSECTIVORA

HEDGEHOG *Erinaceus europaeus* L.

There is a printing error in the Arran paper (page 61), but fortunately it is fairly obvious — 1930 instead of 1900. Hedgehogs were introduced to Arran about the turn of the century, and the earliest published reference that I can find occurs in the *Scottish Naturalist* for 1912, page 259.

Order CARNIVORA

FERRET *Mustela putorius furo* L.

Mr. Ronald MacDonald has kindly informed me that ferrets are now breeding in the wild state fairly extensively over the south of the Island of Arran, and further recent information indicates that this is also the case in other parts of the island.

AMERICAN MINK *Mustela vison* Schreber

Mink are now breeding in the wild state in Arran with considerable success. Many have been seen, several have been shot or trapped, and it looks as if they will soon be well established throughout the island.

Order PINNIPEDIA

GREY SEAL *Halichoerus grypus* (Fabricus)

Two adult female grey seals were seen along the shore west of Kildonan in early September 1969, and one was present in late July and early August 1970.

Order ARTIODACTYLA

URUS *Bos primigenius* Bojanus

CELTIC SHORTHORN *Bos longifrons* Owen

'Bones of the ox' were obtained when excavating the mound at Tor Castle (*Antiquities of Arran*, by John McArthur, 1861, page 81), and from cairns excavated by Dr. E. Duncan and Prof. T. H. Bryce