BEAUFORTIA

SERIES OF MISCELLANEOUS PUBLICATIONS

ZOOLOGICAL MUSEUM OF THE UNIVERSITY OF AMSTERDAM

No. 184

Volume 15
Dedicated to Professor Dr. H. Engel

May 17, 1968

The Soay Beast

L. D. BRONGERSMA

On September 13th, 1959, Mr. Tex Geddes and Mr. James Gavin were fishing one mile from Soay (a small island off the south coast of Skye, Inner Hebrides, Scotland), when a strange marine creature appeared and passed fairly close to their boat. Although Dr. Maurice Burton received a report on the sighting from Mr. Geddes in September, 1959, and an account of it from Mr. Gavin in November, 1959, nothing seems to have been published about it at the time. The story was released when in 1960 the autobiography of Mr. Geddes ("Hebridean Sharker") appeared. Then, the Soay Beast was dealt with by McKay in "The Press & Journal" (Aberdeen) of May 20th, 1960, and by Burton in "The Illustrated London News" of June 4th, 1960. Both McKay and Burton suggest that the Soay beast features in "Hebridean Sharker"; Burton (1961) and Heuvelmans (1965: 257) also refer to this book. During a brief visit to the library of the British Museum I looked through the book, but I could not find any reference to the Soay Beast. That indeed it does not occur in it, was shown by Dr. H. W. Parker, who kindly read the book more thoroughly. However, the Soay Beast appears in another book, viz., in "Ring of Bright Water" by Gavin Maxwell, who (p. 64) based his remarks upon information sent to him by Mr. Geddes.

"The Press & Journal" of May 21st, 1960, states that according to Dr. J. H. Fraser, of the Marine Laboratory, Torry, Aberdeen, the animal seen by Mr. Geddes must have been a Leathery Turtle, an opinion with which I fully concur, as will be shown below. Burton (1960: 972) discusses the Soay Beast, and he arrives at the conclusion that it cannot have been a Leathery Turtle; in a later paper, Burton (1961: 632) makes the suggestion that the Soay Beast may have been an Iguanid lizard.

The report by Mr. Geddes formed the basis for "An artist's impression of the monster Tex Geddes tells of having seen off Soay". This drawing is reproduced by McKay; at a slightly smaller scale and showing more of the foreground also by Burton (1960: 972, lower figure; 1961: 632, lower figure). This artist's impression shows some features that are not mentioned in the

Received: March 7, 1968 [33]

eye-witness accounts by Mr. Geddes and Mr. Gavin, and the artist has turned the Soay Beast into some kind of Great Sea Serpent (fig. 1, lower figure).

The Soay Beast has been referred to by Dinsdale (1961: 216), Holiday (1966a, 1966b), and by Bridgewater (1967: 208). In his book on the Great Sea Serpent, Heuvelmans (1965: 567—570, 643, 665, fig. 111) dealt with it more at length; in his chronological list of records, Heuvelmans (p. 665) adds the indication "?TO", which means that he believes it possibly to have the species of Sea Serpents that he calls "Le-Père-de toutes-les-Tortues" on p. 622 and 643. However, on p. 643 he adds that the Soay Beast could very well have been one of the other species of Great Sea Serpents distinguished by him, viz., the "Cheval Marin", and in that case a specimen of which the manes on the neck had not been noticed.

In two notes on turtles I have already mentioned the Soay Beast as having been a Leathery Turtle, *Dermochelys coriacea* (L.), but without giving any arguments for this identification (Brongersma, 1967: 7; 1968: 30).

Before discussing my arguments for identifying the Soay Beast as being a Leathery Turtle, it is necessary to quote the eye-witness accounts by Mr. Geddes and by Mr. Gavin, because they contain all the evidence available.

According to McKay (1960), Mr. Geddes wrote as follows:

"I noticed a large black shape on the surface of the water away over towards the Skye shore, probably two miles from where we were fishing. When the object appeared to be steaming towards us we both stood up for a better view".

"We both stared in amazement as the object come towards us, for this beast steaming slowly in our direction was like some hellish monster of prehistoric times."

"The head was definitely reptilian 2 ft. 6 ins. high, with large protruding eyes. There were no visible nasal organs, but a large red gash of a mouth which seemed to cut the head in half and which appeared to have distinct lips. The creature's back which rose sharply to its highest point some three or four feet out of the water, fell away gradually towards the after end. I would say that we saw eight to ten feet of back on the waterline."

"Petrified we stood and watched as it came closer and closer. It was soon up parallel with the dinghy at a distance of twenty yards. It seemed oblivious to our presence despite the fact that it was constantly turning its head from side to side, as if surveying all around it."

"Viewed in profile the head appeared to be rather blunt and much darker than the rest of the body, which appeared to be scaly, and the top of its back was surmounted by an immense saw-toothed ridge, or, as Mr. Gavin put it, 'Its back is like the Cuillin'1).

"It seemed to breathe through its mouth which opened and shut with great regularity, and once when its head was turned towards us I could see its cavernous red maw. Whether it had teeth or not I cannot say, but I saw none."

"It was only when it was swimming away from us that we were able to see that the creature's body, although four to five feet broad on the waterline

¹⁾ The Cuillin Hills on the island of Skye, highest peak 3309 feet. L.D.B.

rose sharply to almost a knife-edge at the top of the back."

"We watched this creature as it came towards us, passed us and carried on going away seawards towards the north end of Canna for well over an hour, and still I have no idea what it was."

"I know the Minch as well as most men for I have fished these waters for a good many years, at the ring net, lobstering and harpooning the big basking sharks, and the creature which we saw that day is entirely new to my experience. I am convinced that it can be nothing other than some prehistoric monster's second cousin."

The account given by Mr. Geddes to Dr. M. Burton (1960: 972) mainly contains the same particulars, but there are some additions that are not mentioned in "The Press & Journal". Some extracts are given here.

"I can't remember exactly how close it was when I heard the breathing, but I certainly could hear it before I could definitely have said that the object was alive. It was not making much speed, maybe 3 or 4 knots. We were soon able to make out two distinct objects, one larger than the other, and began making guesses as to what it might be."

"There was at least two feet of clear water behind the neck, less than a foot of which we could see, and the creature's back which rose sharply to its highest point some three to four feet out of the water and fell away gradually towards the after end." "... much darker than the rest of the body which seemed to be scaly..."

"There was surprisingly little disturbance in the water as it passed, even when it submerged, as it did from time to time. Submerging was quite a graceful movement; it arched its neck and leisurely put its head under the surface, the head completely disappearing before there was any appreciable movement from the body, which slid below the surface like a seal... Within seconds the head would break the surface again and come clean out of the water before the body reappeared. During one of its dives we clearly saw a large darker piece sticking up well aft, whether this was some sort of fin, whether a flipper or a foot, your guess is as good as mine."

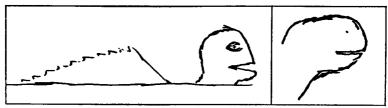
Maxwell (1960: 64) also disposed of an account by Mr. Geddes. From Maxwell's book I quote:

"As it drew near, he first thought that it was a tortoise or a turtle, but as it came abreast of the boat he changed his mind. The head of the creature was about two-and-a half feet out of the water, a head that had 'two huge round eyes like apples', and what Mr. Gavin described as the head of a tortoise magnified to the size of a donkey's. There was a gash-like mouth, with pronounced lips, occupying about half of the head's circumference. The mouth opened and shut rhythmically, throwing a red interior and emitting a wheezing sound that reminded Tex of a cow with pleurisy. He could see neither nostrils nor ears. Some two feet behind the head the back showed, higher than the head, and eight feet or more long; it rose steeply to a gradual fall aft, dark brown, but not as dark as the head. The back was not smooth but 'rose out of the water like the Cuillin hills', as Tex wrote in his letter to me the next day. The impression, he said, was of an animal weighing some five tons. At its nearest point the creature was no more than fifteen or twenty

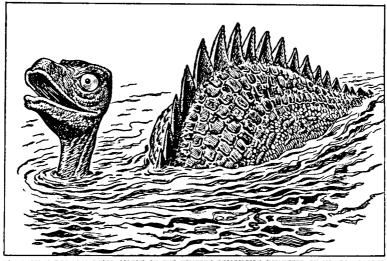
yards from Tex's boat; it passed travelling at five knots or so, heading SSW towards Barra."

Finally the account by Mr. James Gavin (Burton, 1960: 972) may be quoted: "At the waterline the body was 6 to 8 ft. long. It was hump-shaped, rising to a centrally-placed apex about two feet high. The line of the back was formed by a series of triangular-shaped spines, the largest at the apex and reducing in size to the waterline. The spines appeared to be solid and immobile — they did not resemble fins. I only got a lateral view of the animal but my impression was that the cross section of the body was roughly angular in shape. Apart from the forward glide I saw no movement."

"The neck appeared to be cylindrical and, at a guess, about 8 ins. in diameter. It arose from the water about 12 ins. forward of the body. I could not see where they joined; about 15 to 18 ins. of neck was visible. The head was rather like that of a tortoise with a snake-like flattened cranium running forward to a rounded face. Relatively it was as big as the head of a donkey.



(Left.) A COPY OF A DRAWING MADE BY MR. TEX GEDDES, AN EX-HARPOON GUNNER, IMMEDIATELY AFTER SIGHTING WHAT HE BELIEVES TO BE AN UNIDENTIFIED ANIMAL SEEN OFF SOAY LAST SEPTEMBER. (Right.) A COPY OF A DRAWING MADE IN NOVEMBER OF THE SAME CREATURE BY MR. JAMES GAVIN, A CHIEF ENGINEERING INSPECTOR WHO WAS WITH MR. GEDDES AT THE TIME.



AN ARTIST'S DRAWING BASED SOLELY ON THE WRITTEN DESCRIPTION SUBMITTED BY MR. TEX GEDDES.
MR. GAVIN HAS SAID THAT ALTHOUGH THE BODY IS A FAIR REPRESENTATION, THE HEAD SHOULD BE MORE
TORTOISE-LIKE AND HE CANNOT BE CERTAIN ABOUT THE SCALES. MR. GEDDES' AUTOBIOGRAPHY,
"HEBRIDEAN SHARKER," HAS RECENTLY BEEN PUBLISHED BY HERBERT JENKINS, (21s.).

Fig. 1. The Soay Beast; above, left; a sketch by Mr. T. Geddes; above, right: a sketch by Mr. J. Gavin; below: an artist's impression. Reproduced from Burton (1960: 972, fig.), by kind permission of Dr. Maurice Burton and of the Editors of the Illustrated London News.

I saw one laterally placed eye, large and round like that of a cow. When the mouth was opened I got the impression of large blubbery lips and could see a number of tendril-like growths hanging from the palate. Head and neck arose to a height of about two feet. At intervals the head and neck went forward and submerged. They would then re-emerge, the large gaping mouth would open (giving the impression of a large melon with a quarter removed) and there would be a series of very loud roaring whistling noises as it breathed. After about five minutes the beast submerged with a forward diving motion — I thought I saw something follow the body down. It later resurfaced about a quarter of a mile further out to sea and I have watched it until it disappeared in the distance. (I have heard that the crews of two lobster boats, fishing north of Mallaig, have also seen this animal — much to their consternation)."

To the eye-witness accounts, Burton (1960) added two crude sketches, one by Mr. Geddes, showing the parts of the animal that appeared above the surface of the water, and one by Mr. Gavin, showing the head (fig. 1, upper figures).

The quotations given above and the sketches by Mr. Geddes and Mr. Gavin constitute all the evidence upon which an identification must be based. Burton (1961: 632) attaches some value to the artist's impression, although the artist himself did not see the animal and had only Mr. Geddes's verbal description to go by. Burton adds: "This is bound to lead to the possibility of a small margin of error." In this connection it must be remembered that Mr. Geddes's account (McKay, 1960; Burton, 1960: 972) gives a rather dramatized version of the event (e.g., "like some hellish monster of prehistoric times", "Petrified we stood and watched as it came closer and closer", "nothing other than some prehistoric monster's second cousin") and this will have influenced the artist to represent a true sea monster in his drawing. When shown the artist's impression, Mr. Gavin "has said that although the body is a fair representation, the head should be more tortoise-like and he cannot be certain about the scales" (Burton, 1960: 972, in the caption of the figure), and I believe that these remarks must make us very wary of using the artist's impression as evidence as to what the Soay Beast really looked like.

There are some differences between the various accounts, such as in the estimated measurements given by Mr. Geddes and by Mr. Gavin, in the speed of the animal (Geddes, in: Burton, 1960: 972, 3—4 knots, and in: Maxwell, 1960: 64, 5 knots), in the estimate of the distance at which the animal was first sighted (Geddes, in: Burton, 1960: 972, probably two miles, and in Maxwell, 1960: 64, about a mile), etc. Mr. Gavin mentioned features that were not mentioned by Mr. Geddes, e.g., the tendril-like growths hanging from the palate, and the blubbery lips. On the whole Mr. Gavin's account is more sober and, therefore, it appears to me to be the more valuable of the various reports.

Summarizing the data from the reports given by Mr. Geddes and Mr. Gavin we may state that they saw a fairly large animal (Geddes, in: McKay,

1960, visible part of back 8 to 10 ft.; Gavin, in Burton 1960: 972, 6 to 8 ft.), having a humped back with a median, serrate ridge, the body roughly angular in cross section, a head like that of a tortoise, a wide mouth, tendril-like growths on the palate, large eyes, audibly breathing through its mouth, dark in colour (Geddes, in McKay, 1960, a large black shape, and in Maxwell, 1960: 64, dark brown), the head darker than the body. The animal was moving along quietly at the surface of the water and submerging from time to time. "There was surprisingly little disturbance of the water as it passed, even when it submerged" (Geddes, in: McKay, 1960). According to Mr. Geddes the body appeared to be scaly, but Mr. Gavin is not certain about this.

Burton (1960: 972) compared the Soay Beast to various species of tortoises and turtles, and at first he thought that it might have been an unusually large Leathery Turtle, *Dermochelys coriacea* (L.), but in his opinion several arguments pleaded against this identification, viz., the scales in the crest being more marked, the neck not being like that of a Leathery Turtle, and the estimated size.

In the following, the features mentioned by Mr. Geddes and Mr. Gavin may be discussed and compared to those of the Leathery Turtle.

Mr. Geddes (in: McKay 1960, and in: Burton, 1960: 972) estimates the visible part of the back as being 8 to 10 feet in length, Mr. Gavin (in: Burton, 1960: 972) estimates this length being 6 to 8 feet.

To estimate the length of an object sighted at sea is a fairly difficult matter, even more so if the object is moving. In fact two estimates must be made: the distance from the observer to the object, and the length of the object itself. Subconciously or conciously the estimate of the distance will influence the estimate of the length of the object. Mr. Geddes estimated the visible part of the back to have been 8 to 10 ft. long and the distance of the Soay Beast when it passed the dinghy to have been about 20 yards. If, however, Mr. Geddes erred in the estimate of the distance, and this was only 10 yards, the object would have been only 4 to 5 ft. long. It may be objected that Mr. Geddes had a long experience at sea, but when in pursuit of basking sharks his experience told him how long the shark might be, and this will have influenced his estimate of the distance at which the basking shark would have been. In the instance of the Soay Beast any experience was lacking. The visible part of the back estimated by Mr. Geddes to have been 8 to 10 feet long, was estimated by Mr. Gavin to have been 6 to 8 feet long. I have no doubt that they were in good faith when they made the estimates, but I firmly believe that they overrated the distance from the animal. This is, I believe, shown by the remark by Mr. Gavin about the tendril-like growths on the palate (see below), which hardly can have been observed at a distance of twenty yards.

The largest Leathery Turtle as yet recorded from European Atlantic waters had a total length of 271 cm (8 ft. 1 in.), with the carapace 162.5 cm (5 ft. 3/8 in.) long. As mentioned by Burton (1960: 972) there are unconfirmed reports of still larger specimens said to have had a total length of 10 ft. (ca. 305 cm). When a Leathery Turtle is swimming at the surface, only part of its shell will be seen, and the length of this will be much smaller than the

total length. In this connection it is also of interest to compare the estimates to those made by other observers who sighted Leathery Turtles. Mr. P. Davids, who sighted a Leathery Turtle in Carmarthen Bay in August, 1960, estimated its length to have been 8 ft. (in litt.); about two weeks later he again saw a Leathery Turtle and estimated its length to have been 10 to 12 ft. Mr. I. J. Chapman (in litt.) estimated the length of a Leathery Turtle sighted in St. Bride's Bay in August, 1960, at 6 to 8 ft. All these estimates are probably exaggerated, but nevertheless they compare very well with the estimates of the Soay Beast given by Mr. Geddes and by Mr. Gavin under similar circumstances and at least the high estimates of the size of the Soay Beast cannot be used as evidence to prove that it cannot have been a Leathery Turtle.

The carapace of *Dermochelys coriacea* shows seven longitudinal ridges or keels. These ridges may be smooth, but more often than not they show notches with raised tubercles between them (pl. I fig. 2). When the turtle swims at the surface usually three of these ridges are seen, and of these, the median one, is most distinct when the animal is seen in profile. Borlase (1758: 285, pl. xxvii fig. iv; here reproduced in fig. 2A) described and figured a Leathery Turtle from Cornish Waters as having spinous ridges and, therefore, Pennant (1769: 1) named it the Spinous Tortoise. When in 1948 a Leathery Turtle was sighted off Hilbre Island, Skipper W. H. Jones prepared a sketch of it (Ellison, 1948: 15, fig.; here reproduced in fig. 2B). The back of the turtle in this sketch shows a distincly serrate median ridge. Of a Leathery Turtle sighted in Carmarthen Bay in August, 1962, an observer stated "a jagged ridge across its back" ("South Wales Evening Post", September 1st, 1966). The sketch by Skipper Jones and the description of the Carmarthen Bay turtle do remind one strongly of the saw-toothed edge (Geddes, in McKay, 1960) and of the series of triangular-shaped spines (Gavin, in: Burton, 1960: 972) mentioned to be present in the Soay Beast. Here again, the exaggeration of the size of the animal may have led to an erroneous impression of the size of the tubercles of the ridge.

The height of the highest point of the back above the waterline was estimated to have been 3 to 4 ft. by Mr. Geddes (McKay, 1960) and 2 ft. by Mr. Gavin (Burton, 1960: 972). As in the case with the other measurements the height will have been exaggerated. Moreover, when the Soay Beast passed the dinghy of the two observers, they were standing and they will have been looking obliquely down at the animal, and it may be that they calculated into the estimated height part of the breadth of the back, which sloped upwards to the median ridge.

It is of interest to note that in the account sent to Maxwell (1960: 64), Mr. Geddes stated that at first he believed the animal to be a tortoise or a turtle. Mr. Gavin (Burton, 1960: 972) stated the head was rather like that of a tortoise, and when dealing with the artist's impression Mr. Gavin remarked that the head should be more tortoise-like. I believe that these statements are very much in favour of concluding that the Soay Beast was a turtle. The fact that Mr. Geddes changed his mind when the animal drew closer is understandable. Most people know what a turtle, such as a Green Turtle, a

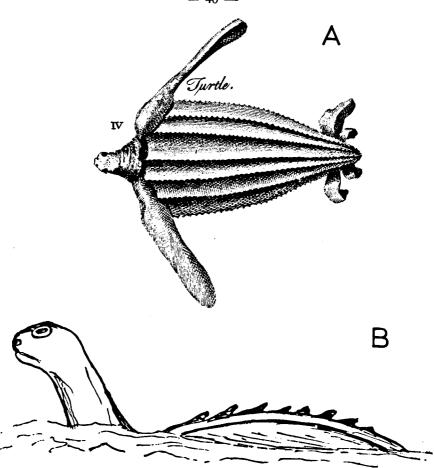
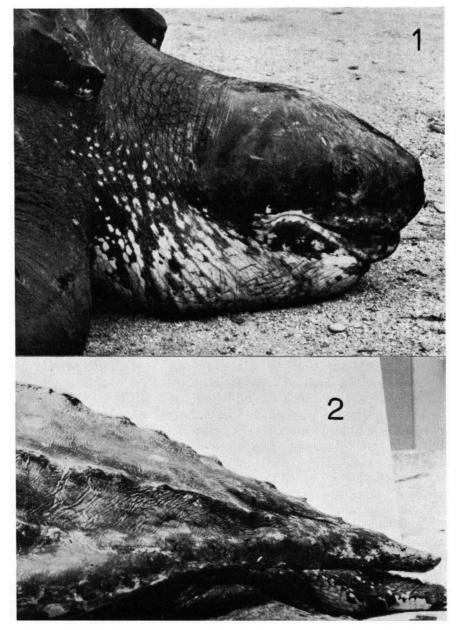


Fig. 2. Dermochelys coriacea (L.); A, from Borlase (1758, pl. xxvii fig. iv); B, sketch by Skipper W. H. Jones of a Leathery Turtle sighted 8 miles NW of Hilbre Island, September 26th, 1948 (Ellison, 1948: 15, fig.). Fig. 2B reproduced by kind permission of the Editors of Cheshire Life.

Loggerhead, or a Hawksbill, looks like, either from illustrations or from having seen them in an aquarium. However, a Leathery Turtle is such a very different animal that someone, who does not know it, will have difficulty in recognizing it as a turtle, especially when the animal is partly submerged.

The description of the Soay Beast as having a wide, gaping mouth fits the Leathery Turtle very well. Mr. Geddes in one account (McKay, 1960) mentions the animal having distinct lips and in another account (Maxwell, 1960: 64) pronounced lips are mentioned; Mr. Gavin (Burton, 1960: 972) got the impression of large, blubbery lips. The descriptions do not very well fit with the general impression one gets when looking at a turtle. However, the photograph of the head of a Leathery Turtle taken on the French coast (pl. I fig. 1) does indeed show a situation that may have led to the impression of the animal having pronounced, blubbery lips.

A feature mentioned by Mr. Gavin (Burton, 1960: 972), but not by Mr.



Pl. I. Dermochelys coriacea (L.).

- 1, side view of head of a specimen taken at L'Aiguillon-sur-mer, Vendée, France, June 31st, 1966; by kind permission of Dr. R. Duguy, director of the Musées d'Histoire Naturelle, La Rochelle.
- 2, side view of posterior part of the carapace, of a specimen captured off Bonaire, Netherlands Antilles, April 1965. Rijksmuseum van Natuurlijke Historie, Leiden, no. 13952 (received from Carabisch Marien-Biologisch Instituut, Curaçao).

Geddes is the presence of a number of tendril-like growths hanging from the palate. The Leathery Turtle has horny papillae on its palate and in its oesophagus (even as in other turtles) and those of the palate can distinctly be seen when the mouth is opened (pl. II). The fact that Mr. Gavin did see these papillae seems to indicate that the animal was fairly close to the boat, and that the estimate of the distance from the observers (and hence the estimate of the size of the Soay Beast) is too high. One might also think of another explanation of the tendrils. The observers state that the animal submerged repeatedly and it may be taken that it did so to feed. One of the main food items of Leathery Turtles are jellyfish. It could be that when coming to the surface after feeding, pieces of jellyfish (e.g., parts of tentacles) might still be clinging to the palate and that these might give the impression of tendrill-like growths hanging from the palate.

Both observers mention the noise made by the Soay Beast when breathing. Mr. Geddes (Maxwell, 1960: 64) described the noise "as a wheezing sound" that reminded him of "a cow with pleurisy". Mr. Gavin (Burton, 1960: 972) speaks of "a series of loud roaring whistling noises". Of the Leathery Turtle sighted off Lundy in August, 1966, it is stated that its breathing could be heard (Mrs. Shirley Glover, in litt.).

Burton (1960: 972) is of the opinion that the description of the neck of the Soay Beast does not fit that of a Leathery Turtle, and this he believes to be the strongest argument against identifying it with this species of turtle. In this connection the sketch by Skipper W. H. Jones of the Leathery Turtle sighted of Hilbre Island (fig. 2B) is of interest. It shows a turtle with a fairly long neck and the head well raised above the water. About a Leathery Turtle sighted in Carmarthen Bay in August, 1962, Mr. J. S. DeVall (in litt.) states: "it slowly and purposefully raised a rather thick neck some six or seven inches in diameter surmounted by a rather roundish head approximately the size of a football", and "This turtle slowly looked at us, and with the same slow movement lowered its head and neck." Of another Carmarthen Bay Leathery Turtle (August, 1966), Mr. P. Davids (in litt.) states that its neck was "jutting forward and upward at an angle". Major John Day (in litt.) mentions the Leathery Turtle sighted off Lundy raising its head above the water, and this is confirmed by Mrs. Glover (in litt.), who states that the turtle raised its head quite clear of the water. Mr. I. J. Chapman (in litt,) with regard to a Leathery Turtle seen in St. Bride's Bay (August, 1960) writes "head well above water". Mr. Oddbjörn Pettersen (in litt.) writing about a Leathery Turtle seen in Oslo Fjord (August, 1967) states that it raised its head two or three times above the surface of the water. With these reports on animals of which there can be no doubt about their being Leathery Turtles, raising their head above the surface of the sea, the similarity with the behaviour of the Soay Beast is striking. It may be that in this sketch Skipper Jones made the neck a little too long, and that the estimate of the length of the neck by Mr. Geddes and Mr. Gavin was too high, but the fact remains that this turtle is able to raise its head well above the water. Further, it must be remembered that the figures of Leathery Turtles usually depict dead specimens or captured animals, and these probably have their necks not fully stretched.



Pl. II. Dermochelys coriacea (L.), front view of the head of a specimen taken between Sorong and Saonek Island, Western New Guinea, February 14th, 1957, leg. Dr. G. F. Mees. Rijksmuseum van Natuurlijke Historie, Leiden, no. 14408.

Mr. Geddes (Burton, 1960: 972) mentions seeing "a large darker piece sticking up well aft" when the animal was diving, and he adds "whether this was some sort of fin, whether a flipper or a foot, your guess is a good as mine". Mr. Gavin (Burton, 1960: 972) states: "I thought I saw something follow the body down." When the animal is swimming at the surface, the anterior margin and the strongly tapering posterior part of the carapace, as well as the flippers will be under water and out of sight. When the turtle dives with a forward movement the narrow hind part of the shell and one

or both of the hind flippers will come close to the surface, and it is suggested that this is what the observers saw.

Mr. Geddes (McKay, 1960) states that the body "appeared to be scaly". Mr. Gavin (Burton, 1960: 972) does not mention scales, and when shown the artist's impression of the Soay Beast said that he could not be certain about the scales. Burton (1960: 973) wrote: "the appearance of the skin which looked scaly yet seemed not to bear scales." There is no pertinent evidence that the animal had scales, at least, none were distinctly seen. The character of the ridges on the shell with their notches and raised tubercles (called "scales" by Burton, 1960: 972) may have given the impression of scales being present. The observers did not mention other ridges (than the median one) being present, but as they stood up in their dinghy to have a better view they will have looked down obliquely on the animal, and they will not have seen the latero-dorsal ridges in profile, but they must have looked upon them more or less perpendicularly. The uneven border of the ridge may have added to the impression of the animal being scaly.

The colour of the animal was dark. Geddes (McKay, 1960) speaks of "a large black shape", and in another report (Maxwell, 1960: 64) it is stated that the body was "dark brown, but not as dark as the head". The difference in colour between the body and the head may be due to a difference in the illumination of these parts, the oblique, sloping surface of the carapace receiving more light than the more or less perpendicular side of the head. This difference is not of importance, however, the important feature is that the colour of the Soay Beast agrees with that of Leathery Turtle, which is described as being blackish, dark grey, or dark brown, sometimes with a greenish tinge.

Summarizing, we may state that the features mentioned by the observers (median serrate ridge, shape of head, wide mouth, "tendril-like" growths on the palate, colour, behaviour, etc.) all agree with those of Dermochelys coriacea (L.). There is nothing in the accounts that definitely prohibits identifying the Soay Beast with the Leathery Turtle. To the contrary, the description by the observers is what one may expect when two people try to describe a strange creature, which is of a kind unknown to them, and which turns up in area where it occurs only occasionally. In the past Dermochelys coriacea was considered to be extremely rare in European Atlantic waters, but since 1956 it has been regularly reported in British, Irish, and Norwegian waters. In August 1959, a male was captured in Kilbrannan Sound, a specimen was captured and released off Inishgallon (a small island off the coast of Keel, Achill Island), a dead specimen was found on the shore of Solway Firth, and in October 1959 a live Leathery Turtle was sighted twenty miles NNW of Cape Wrath. Thus, in 1959, four specimens were observed in Scottish and Irish waters and in my opinion the Soay Beast is the fifth that year. Live specimens have been observed in these northern waters from June to November. The majority of the observations in British, Irish, and Norwegian waters are from the second half of August and the first half of September and the date upon which the Soay Beast was sighted (September 13th) comes within this period. This may be an additional indication of the likelihood that the animal was a Leathery Turtle.

Considering all facts, I do not hesitate in confirming the identification made by Dr. J. H. Fraser, of Aberdeen, that the Soay Beast was a specimen of Dermochelys coriacea (L.).

Burton (1961: 632) dealt once more with the Soay Beast, attempting to show that it may have been some kind of Iguanid lizard. The artist's impression of the Soay Beast with its scaly body and the median crest of transversely placed, triangular scales, each with a serrate border and a distinct keel on the anterior surface (features not mentioned by the observers) play a part in his reasoning. It may be pointed out that such scales as shown in the drawing of the Soay Beast are very different from the laterally compressed, falciform scales in the dorsal crest of Iguana iguana (L.). Further, Burton seems to have overlooked the fact that Iguanid lizards have short necks and that such a lizard would never have been able to raise its head so far out of the water without its shoulders and at least part of its front legs showing. Burton states that the Common Iguana is reputed to reach a total length of 7 ft., of which two-thirds are tail; this leaves about 2 ft. 4 in. for the head and body. If the lizard is partly submerged the visible part of the back would have measured about 1 ft. In that case the observers would have exaggerated the size of the animal about six to eight times, and this is much more than I would saddle the observers with. In my opinion the size of the Soay Beast undoubtedly was exaggerated but probably to not more than twice the actual length.

Although there are Iguanid lizards that enter the see in search for food (Amblyrhynchus cristatus Bell of the Galapagos Islands), these lizards remain truly terrestrial animals. That an Iguanid lizard like Iguana iguana (L.) would survive a voyage across the Atlantic Ocean lasting for many months and probably for more than a year, without obtaining food, seems unlikely, to say the least. With regard to the suggestion that the Soay Beast may have been a lizard, Burton (1961: 632) writes: "This tentative hypothesis may seem preposterous, even crazy. At least we can say that the Soay Beast does not conform in the slightest with the best authenticated records of the sea serpent, and to identify it with these — or to assume it was an animal adapted to an aquatic life — is even more preposterous." And although Burton adds: "A crazy hypothesis is better than none at all", I would rather reply to the hypothesis by quoting from an earlier publication by Burton (1954: 272-273): "The greater probability is, however, that monsters and mysteries belong in reality to the world of commonplace, or nearly so, that they are known animals seen in a different light and inadequately observed". With this statement in mind, is it so preposterous to try and search for the identity of the Soay Beast among known marine animals? Two observers see a creature that is quietly moving along at the surface of the sea, and that from time to time deliberately dives under water. This is to be expected in a marine animal, but hardly so in a terrestrial lizard that has accidentally got into the sea. There is no evidence at all for the tentative suggestion (Burton, 1961: 632) that "the reported opening and shutting the mouth and breathing audibly" meant that the animal was "at its last gasp", for we know

now that the Leathery Turtle breathes audibly when swimming quietly at the surface.

It is true that to-day we know so much more about the Leathery Turtle in European waters than was known in 1960 and 1961, that is easier to identify the Soay Beast for what it really was than at the time when Burton (1960, 1961) wrote his notes.

REFERENCES

BORLASE, W.

1758 The natural history of Cornwall: i-xix, 1—326, pls., map. (London, W. Sandby).

BRIDGEWATER, C.

1967 Marine monsters. — Nautical Magazine, 197 (4): 207—208.

BRONGERSMA, L. D.

1967 What you should do if you see or catch a turtle. — Fishing News, 2839 (Nov. 3rd): 7, 8 figs.

1968 Turtles. — Marine Observer, 38: 28—34.

BURTON, M.

1954 Living fossils: i-xiv, 1—282, 83 figs. (London and New York, Thames & Hudson).

1960 The Soay Beast. — Illustr. London News, June 4th: 972—973, 9 figs.

1961 Was the Soay Beast a tourist. — Illustr. London News, Oct. 14th: 632, 2 figs.

DINSDALE, T.

1961 Loch Ness monster; i-viii, 1—248, 28 figs., 18 figs. on plates. (London, Routledge & Kegan Paul).

ELLISON, N.

1948 A naturalist's notebook. — Cheshire Life, December: 15, 1 fig.

GEDDES, T.

1964 Hebridean sharker. (London, Herbert Jenkins).

HEUVELMANS, B.

1965 Le Grand Serpent de Mer, le problème zoologique et sa solution. Histoire des bêtes ignorées de la mer: 1—751, 122 text-figs., 48 pls., 2 charts. (Paris, Librairie Plon).

HOLIDAY, F. W.

1966a Only a worm in Loch Ness? — The Field, 228 (5943): 1216.

1966b Turtles and great worms. — The Field, 228 (5945): 1305.

McKAY, A.

1960 Andrew McKay's Column. — The Press & Journal (Aberdeen), May 20th. MAXWELL, G.

1960 Ring of bright water, 5th impr.: i-x + 1—211, text-figs., pls. (London, Longmans, Green & Co.).

PENNANT, T.

1769 British zoology, 3rd ed., vol. 3, Class III. Reptiles. IV. Fish: i-xii + 1—358 + (1), pls. (London, Benjamin White).

PROF. DR. L. D. BRONGERSMA,

Rijksmuseum van Natuurlijke Historie,

Raamsteeg 2.

Leiden — The Netherlands

For sale at the Administration of the Zoological Museum of the University of Amsterdam

Price Hfl. 3.50 (Dutch Florins)