FERAL FERRET ON LUNDY

BY CHRIS C. BAILLIE

On 12th April 1981 at the Quarter Wall gate (east) fresh tracks of a Mustelid were found by C.C.B. and other observers. The tracks were in good condition being in soft mud. Notes, sketches, and measurements were made, and these were later used to identify the tracks as having been made by a ferret (*Mustela furo L.*). Lawrence and Brown (1967) was used as the reference work.

Ferrets have been used in recent winters for flushing rabbits. Mr. S. Wing reported having seen what he thought to be a ferret bolting down a rabbit burrow near the water tanks (Airfield) a few weeks previously.

Ferrets have colonised several British islands (Walton) including moorland habitats. more information on island colonies is being sought, with particular reference to burrow-nesting seabirds.

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MARINE LIFE ON THE WRECK OF THE M.V. "ROBERT"

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INTRODUCTION

On January 21st 1975, a small coastal vessel, the M.V. "Robert", sank off Lundy. The exact location of the wreck remained undiscovered until 1979 when it was found lying intact on its starboard side on the level seabed at 19m below Chart Datum about 1km east of Tibbets Point. The "Robert" is now buoyed at the beginning of each diving season by Bristol Channel Divers who own the wreck and is a further fascinating aspect of the appeal of Lundy to divers.

The plant and animal communities living on the "Robert" have many features of great interest to biologists. The wreck is a dated object on which the progress of colonisation and the growth of species can be studied. Wrecks and other artificial structures appear to have very distinctive communities and the "Robert" provides an opportunity to describe one such community. Also, the different communities which colonise different parts of the wreck, particularly on vertical, horizontal and hold surfaces, can be described. The hold is similar to a large cave and some species normally restricted to caves might be expected to occur there. The flat surfaces presented by the hull of the "Robert" are ideal for quantitative sampling and testing of sampling methods.

During the past three years, I and my colleagues have dived on the wreck many times to describe, sample and photograph the communities present. In 1980, a sampling programme aimed at studying optimum sampling size for homogeneous communities was undertaken using the horizontal surface of the hull.

COMMUNITIES PRESENT ON THE "ROBERT"

Very similar communities have been seen in each of the three years of study. A summary of the main conspicuous species present is given in Table 1.

Horizontal surfaces of the wreck appeared at first glance to be colonised by a sparse patchy cover of erect bryozoans (sea-mats) and hydroids (sea-firs) with a few scattered algae, but closer inspection has revealed an almost continuous crust of

sandy tubes constructed by the worm *Sabellaria spinulosa*. Within this turf of hydroids, bryozoa and other species, a habitat was formed in which silt (an important source of food for deposit feeders) was trapped and in which a wide variety of small worms, crustaceans and molluscs could live. Plumose anemones, *Metridium senile*, which are rarely observed elsewhere on Lundy, dominated the edges of horizontal surfaces and were scattered over the port side. One hundred and eighty-seven animal species were collected from 1.4m^2 of horizontal hull sampled in 1980 and, together with species recorded during *in situ* surveys, a total of 222 plant and animal taxa have been recorded from the "Robert".

Vertical surfaces mainly on the bottom of the vessel had much sparser communities than the horizontal surfaces with the tube-worm *Pomatoceros triqueter* a particularly conspicuous element of the community. Plumose anemones were scattered over the vertical surface and patches of the feather star *Antedon bifida*, which is also very rarely observed elsewhere on Lundy, were observed. The frequent presence of large ascidians, *Ascidia mentula*, indicates a high degree of shelter from tidal streams on the bottom of the wreck but many of the colonising species are typical of disturbed areas and it seems likely that sand-scour occurs on this surface.

Inside the hold, plumose anemones were abundant together with patches of *Ascidia mentula*. The dahlia anemone *Urticina eques*, which is usually found only in deep (dark) water, was also present in large amounts. Another unusual feature of the hold communities was the presence of the sessile phase of the jellyfish *Aurelia aurita*. These scyphistomae are usually found in areas of extreme shelter and the hold clearly provides a suitable habitat. The most interesting finds were several large cup corals, *Caryophyllia smithii*, a species common on the nearby coast but with a short-lived larva thought unlikely to colonise distant hard substrata in such a short time. Also, the size of the corals was remarkable indicating a more rapid growth rate than had previously been expected.

Less extensive habitats which has a distinctive fauna included spars and rails which were dominated by *Metridium senile*, the hydroids *Tubularia larynx* or *T. indivisa*, or tubes of amphipod crustacea (most likely *Jassa falcata*). Protruding features such as deck edges and strakers formed a microhabitat colonised particularly by the feather star *Antedon bifida* and colonies of the bryozoan *Pentapora foliacea* as well as the ubiquitous *Metridium senile*. In 1979 and 1980, remains of the tarpaulins were present over the hold and these were colonised by *Metridium senile*, small anemones, encrusting bryozoa and the erect bryozoan *Cellaria* sp.

The fish life present over and in the wreck was rich in numbers but few in species. Only pollack *Pollachius pollachius*, shoals of a small unidentified gadoid and a few ballan wrasse, *Labrus bergylta*, were present swimming around the wreck whilst, inside the hold, small shoals of poor cod, *Trisopterus minutus*, were present.

Almost as interesting as the species present, were the species absent from the wreck. There were no large branching sponges or sea fans in particular and colonies of the dead men's fingers *Alcyonium digitatum* were rarely observed. These species would be expected to thrive in the conditions of depth and water movement present over the wreck.

It appears that the basic community present on the "Robert" was established rapidly during the first few years of the wreck Indeed, areas scraped clean in 1980 could not be distinguished from the surrounding communities one year later. Changes are now occurring only slowly and all divers visiting the "Robert" can help to record the future settlement and change in communities by noting any differences they observe and providing photographs of the communities present.

ACKNOWLEDGEMENTS

The quantitative sampling programme mentioned here was carried out by Dale Cartlidge who also assisted in descriptive survey together with Sue Hiscock and Christine Maggs.

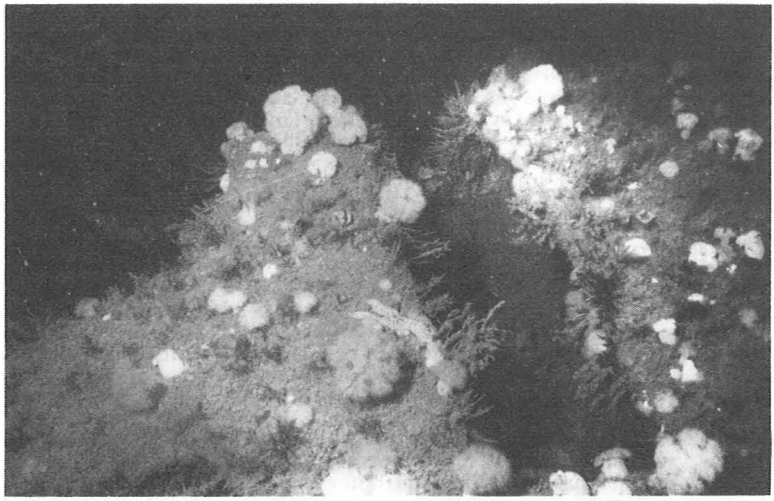

PLATE 1. Part of the bridge structure with plumose anemones *(Metridium senile)* and tubes of the hydroid *Tubularia indivisa* conspicuous.

PLATE 2. Horizontal surface near the stern showing turf of erect bryozoa and hydrozoa with dense plumose anemones near the edge.

PLATE 3. Vertical surface adjacent to the sand plain with sparse erect epibiota including the feather star *Antedon bifida.*

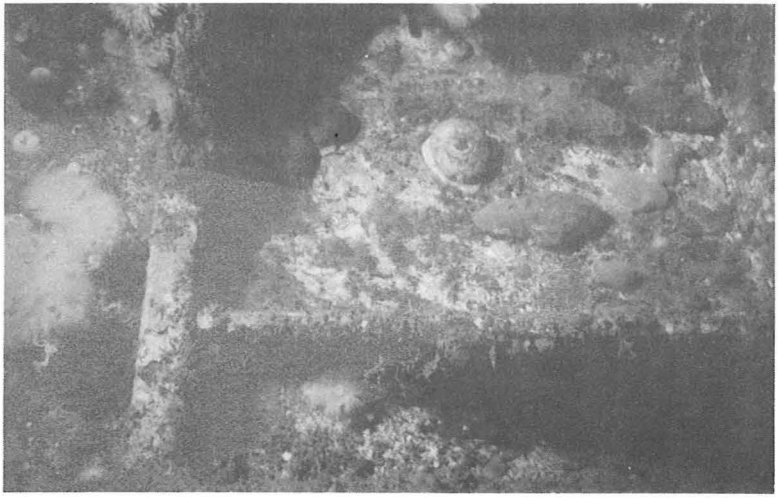

PLATE 4. Inside the hold near to the 'roof' showing large ascidians, *Ascidia mentula,* the anemone *Urticina eques* and plumose anemones.

TABLE 1

Communities of conspicuous species present on horizontal (port side) and vertical (bottom) surfaces of the hull of the M.V. "Robert" listed from *in situ* observations and photographs. Communities present in the hold are described mainly from photographs and not systematic survy. Records from 1979 and 1980 are used. Where recorded abundance was different in the two years, the 1980 record is used.

HORIZONTAL	VERTICAL	HOLD
ABUNDANT/COMMON		
Sabellaria spinulosa	*Metridium senile*	*Metridium senile* *Ascidia mentula*
FREQUENT		
Nemertesia antennina	*Nemertesia antennina*	*Urticina eques*
Nemertesia ramosa	*Pomatoceros triqueter*	*Filograna implexa*
Metridium senile	*Bugula plumosa*	*Pomatoceros triqueter*
Cellaria spp.	*Ascidia mentula*	*Asteria rubens*
Crisiidae		*Trisopterus minutus*
OCCASIONAL		
Rhodymenia pseudopalmata	*Dysidea fragilis*	*Tubularia larynx*
var. *ellisiae*	Entrusting sponges	*Caryophyllia smithii*
Antithamnion plumula	*Nemertesia ramosa*	*Aurelia aurita* (scyhphistomae)
Antithamnion cruciatum	*Urticina felina*	Encrusting bryozoa
Ceramium tenuissium	*Eubranchus tricolor*	*Bugula plumosa*
Hypoglossum woodwardii	?Jassidae (tubes)	*?Protula tubularia*
Myriogramme bonnemaisonii	Crisiidae	*Antedon bifida*
Polyneura gmelinii	*Cellaria* spp.	*Diplosoma listerianum*
Delleseria sanguinea	*Cellepora pumicosa*	*Didemnum maculosum*
Radicilingua thysanorhizans	*Pentapora foliacea*	
Dictyopteris membranacea	Encrusting bryozoa	
Dictyota dichotoma	*Berenicea patina*	
?Dysidea fragilis	*Asterias rubens*	
Tubularia indivisa	*Antedon bifida*	
Sertularia argentea	*Botryllus schlosseri*	
Plumularia setacea	*Diplosoma listerianum*	
Aglaophenia tubulifera	*Didemnum maculosum*	
Sagartia troglodytes		
Urticina felina		
Sabella penicillus		
?Jassidae (tubes)		
Inachus sp.		
Eubranchus tricolor		
Polycera faeroensis		
Scrupocellaria sp(p).		
Bugula plumosa		
Bugula turbinata		
Flustra foliacea		
Pentapora foliacea		
Omalosecosa ramulosa		
Amathia lendigera		
Antedon bifida		
Asterias rubens		
Luidea ciliaris		
Labrus bergylta		
Pollachius pollachius		
RARE		
Tubularia larynx	*Halecium halecinum*	*Alcyonium digitatum*
Hydrallmania falcata	*Abietinaria abietina*	*Munida rugosa*
Sertularella polyzonia	*Antennella secundaria*	
Sagartia elegans	*Caryophyllia smithii*	
Pomatoceros triqueter	*Corynactis viridis*	
Cancer pagurus	*Bugula turbinata*	
Liocarcinus puber	*Bugula flabellata*	
Parasmittina trispinosa	*Maia squinado*	
Alcyonidium gelatinosum		
Marthasterias glacialis		
Echinus esculentus		