

THE MARINE FAUNA OF LUNDY
CRUSTACEA: EUPHAUSIACEA and DECAPODA

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INTRODUCTION

Only two species of euphausiids, *Nyctiphanes couchii* and *Meganycitiphanes norvegica* are recorded from Lundy though the plankton has not been thoroughly sampled in these studies. These species and one other are recorded in both the Plymouth Marine Fauna (Marine Biological Association, 1957) and the Dale Fort Marine Fauna (Crothers, 1966). Harvey (1950) recorded at Lundy only *M. norvegica* which has not been recorded since. Its occurrence was atypical, being littoral — Hydrological conditions and other details are unknown.

Information on Lundy decapods has been slow to accumulate and comparisons with the Plymouth Marine Fauna (Marine Biological Association, 1957) and Dale Fort Marine Fauna (Crothers, 1966) indicate that an extension of the list is to be expected (see below). Of the 21 species identified at Lundy by Harvey (1950, 1951), 4 have not been recorded since (*Palaemon elegans*, *Athanas nitescens*, *Xantho pilipes*, *Xantho incisus*). Restricted collections and observations have been made almost annually since the late 1960's (see name list for those involved) and by the end of 1979, 49 species had been recorded plus a *Processa* zoea not identified to species. Intensive collections in June and July 1980 yielded 40 species including many previously reported but unsupported by preserved specimens and the list is now extended to 53 species including the processid. Two of the species collected in 1980 had not been reported since Harvey's spring and summer investigations mainly between 1948 and 1950 (*Porcellana platycheles* and *Hyas coarctatus*). Whether the differences between Harvey's records and later collections represent subsequent absences or less thorough collecting is uncertain.

The Lundy decapod fauna recorded to date compares in species number with the Dale Fort decapod fauna (Crothers, 1966) but is 30% different in composition. However, almost twice as many decapod species are recorded from the Plymouth area (Marine Biological Association, 1957).

SAMPLING METHODS

In the littoral, specimens were collected by hand, carideans being caught with a hand net. In the sublittoral, specimens were collected using SCUBA techniques, either by hand (RJAA† and others), by means of suction-sampling (DC, KH, JW), or by taking sediment cores (CGM, RH, JW). The occurrence of some species was noted using time-lapse photography and underwater television (RJAA, RSVP) and specimens were also collected in a small beam trawl (beam width 150 cm, mesh 10 mm) and in benthic and pelagic traps (RJAA, PJS). Conspicuous species were usually identified *in situ* and not collected, otherwise species were identified in the laboratory and were usually preserved and retained.

Plankton net samples taken in connection with other studies contained decapod larvae and have added some information. Only a processid shrimp was recorded from its zoea alone and not also collected as an adult. The euphausiid *Nyctiphanes couchii* was taken from plankton tows and stomachs of the planktivorous Red Band-fish, *Cepola rubescens*, which also contained some decapod larvae.

By these various means a wide variety of habitats has been investigated at sites all round the island. The sublittoral areas most intensively sampled have been those where a suction sampler has been used on both hard substrata (for instance, Brazen Ward, Dead Cow Point, the wreck of MV Robert) and particulate substrata at a variety of sites, mostly off the east coast.

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GENERAL OBSERVATIONS

Littoral collections indicated large numbers of only two species, *Cancer pagurus* and *Liocarcinus puber*. *Carcinus maenas* was not common, each shore yielding only a few, mostly small, specimens from under stones and rock pools whereas almost every stone and boulder sheltered small *C. pagurus* and a range of sizes of *L. puber*. *Pisidia longicornis* was found under some low shore boulders and amongst stones, particularly in The Gates and most low shore boulders at this site also sheltered at least one specimen of *Pilumnus hirtellus*. *Palaemon serratus* was the only caridean found intertidally (in rockpools) in recent years and most other shore records for decapods depend on Harvey's meticulous collections mainly from 1948-1950 giving a total of 21 intertidally collected species plus crabs of the genus *Inachus* which he did not identify to species. *Palaemon elegans*, *Athanas nitescens*, *Porcellana platycheles*, *Xantho pilipes* and *Xantho incisus* are known only from intertidal collections.

Sublittorally, where 48 decapod species have been collected, species distribution may be conveniently divided according to habitat. The areas of muddy substrata off the east coast (Quarry Bay to Gull Rock, pockets between Gull Rock and Gannets' Bay, Gannets' Bay) are extensively burrowed by the crab *Goneplax rhomboides* with burrow densities of around 1 burrow/m² in Quarry Bay and Gannets' Bay (Atkinson, 1975; Atkinson, Pullin and Dipper, 1977) and exceeding this in Halfway Wall Bay where 1.56 burrows/m² occurred in a 100 square metre mapped area (RJAA, RSVP, CGM, in prep.). Burrow occupancy was not assessed at Lundy but studies elsewhere suggest a 70% occupancy as reasonable (Atkinson, 1974a). The size of the Lundy population is therefore considerable. The basic burrow is a shallow horizontal tunnel open to the surface at each end and elaborated by usually one additional tunnel added at right angles to form a T (see Atkinson 1974a, 1975). The crabs are rarely seen by day but emerge at night (Atkinson, 1974b, 1975). The *G. rhomboides* burrows sometimes interconnect with those of the Red Band-fish, *Cepola rubescens* (see Atkinson, Pullin & Dipper, 1977).

Other conspicuous species recorded from the mud are *Liocarcinus holsatus* and *L. depurator*, *Cancer pagurus*, *Atelecyclus rotundatus* and *Maja squinado*. During underwater television studies on *C. rubescens* all the above species appeared most active by night (it was impossible to differentiate between the *Liocarcinus* species using T.V.).

The anomuran *Munida rugosa* was seen occupying vacated *G. rhomboides* burrows (small *Munida*) and particularly vacated *C. rubescens* burrows (large *Munida*), the anomuran normally occupying the burrow entrance and withdrawing when disturbed. Some observers had mistakenly assigned this species to *Nephrops norvegicus* which does not occur at Lundy.

With the exception of *Goneplax rhomboides*, the other species also extend to adjacent sandy areas with occasional *M. rugosa* living under stones in these areas.

The inconspicuous species associated with particulate deposits are mainly hermit crabs, particularly *Anapagurus hyndmanni*, this normally occupying small *Nassarius incrassatus* shells. Although small *Pagurus bernhardus* were seen, no large specimens were encountered and there appeared to be a lack of suitable large shells for this species to occupy (see Picton, 1978).

The thalassinoids *Callianassa tyrrhena*, *Upogebia stellata* and *U. deltaura* burrow in the soft deposits off the east coast whilst the last species also burrows in sands and muddy gravels on the east coast and appears to be the commonest of the three. Burrows tentatively assigned to *U. stellata* have been found intersecting with the lower sections of *C. rubescens* burrows (see Atkinson *et al.* 1977). Polyester resin casts indicated that the former burrows consisted of a lattice of numerous tunnels interconnecting at nodular Y-shaped intersections. Similar burrows were produced by a Lundy *U. deltaura* in an aquarium.

Crabs of the genus *Ebalia* were taken from particulate deposits. The commonest species was *E. tuberosa*, found in small numbers off all coasts usually in gravelly substrata. In the Clyde, this species has been shown to bury itself in silty gravelly sands with a proportion of coarse material (pebbles, etc) and experiments indicated that it preferred gravels to either sand or mud (Schembri, 1980)

which also seems to be borne out at Lundy. Few *E. tumefacta* were found at Lundy, being recorded from the south east and south coasts, predominantly from sediments containing coarse sand but as with *E. cranchii*, insufficient numbers were found and insufficient is known of their biology to delimit their sediment requirements.

Several carideans were taken by towing the small beam trawl along the east coast sands and muds south of Gull Rock. The commonest was *Pandalus montagui* but *Crangon allmani* and *C. crangon* were also taken. *C. crangon* was also taken in sediment samples. The beam trawl method was also successful in collecting the spider crab *Macropodia rostrata* which came up attached to the alga *Polysiphonia elongata*. This alga had probably been detached from small stones by the trawl (S. Hiscock, pers. comm.). Spider crabs, together with hermit crabs were also taken in benthic traps from the same grounds.

Pisidia longicornis was taken from under stones overlying particulate deposits in some cases but was not encountered in sediment samples. This is consistent with its reported ecology. Nicol (1932) describes the species as occurring amongst bryozoa and *Laminaria* and under stones but being absent from muddy areas.

Undergrowth samples from hard substrata, for which the most efficient method of collection was suction sampling, yielded large numbers of *Pisidia longicornis*, *Eurynome spinosa*, *Pilumnus hirtellus* and at some sites *Liocarcinus holsatus*, together with a variety of less common species, mostly carideans and spider crabs but including all 5 British *Galathea* species. The commonest carideans were *Hippolyte varians* and *Pandalina brevirostris*.

The commonest spider crabs in undergrowth samples were *Achaeus cranchii* and *Eurynome spinosa*. With regard to the genus *Eurynome*, all 102 specimens examined were *E. spinosa*. Thus, the records of *E. aspera* are almost certainly incorrect, referring to *E. spinosa*; the specimens assigned to *E. aspera* were unavailable for checking. Two specimens of the recently described *Macropodia linaresti* were taken from undergrowth samples one at Rat Island and the other from the wreck of MV Robert. Great difficulty was experienced in identifying young crab stages of the spider crab genus *Inachus*. Eliminating *I. dorsettensis* (see Ingle 1977), the possibility of confusion was between *I. phalangium* and *I. leptochirus* since the adult key characters are not usable in the young stages. After consultation with Dr. R. G. Hartnoll, it was decided to assign the young stages collected to *I. phalangium* since a number of adults of this species had been recorded but there was no record of adult *I. leptochirus*. Colouration and habitat also supported this conclusion. This identification difficulty was also apparent in past records where observers of unretained specimens had usually been unable to identify *Inachus* to species. (Similar confusion was apparent in hermit crab identification with many unretained specimens just referred to as 'pagurid').

Harvey collected Laminarian holdfasts in 1949 and 1950 and Moore collected *Laminaria hyperborea* holdfasts in 1975. Both examined the associated fauna (see Harvey, 1950, 1951; Moore, 1978) and both found the commonest decapod inhabitants to be *Pisidia longicornis* and *Pilumnus hirtellus* (respectively, up to 6 and 4 specimens/holdfast in Moore's data). Harvey found small *Carcinus maenas* and *Cancer pagurus* present in some cases and Moore found *Thorulus cranchii* twice and *Eurynome spinosa* once.

The following species are widely distributed.

Cancer pagurus appears to occur in all habitats and at all depths around the island. *Homarus gammarus* and *Palinurus elephas* also occur all round the island in small numbers and are taken commercially along with *C. pagurus*. *H. gammarus* is normally encountered in crevices formed under and between larger boulders or in horizontal clefts in bedrock particularly at the sediment/rock interface while *P. elephas* is encountered in a variety of habitats, often in the open but usually in the vicinity of rocks, particularly off the south and west coasts.

Maja squinado is another conspicuous species encountered all round the island on a wide variety of substrata with small specimens camouflaged with algae. In 1980, specimens in the vicinity of the Knoll Pins and Gannets' Rock had many

walking legs missing though the chelae were intact. The cause of this damage was not discovered.

Of the *Liocarcinus* species, *L. puber* was recorded from all coasts, usually amongst rocks in the shallow water but occasionally from deep water.

ANNOTATED SPECIES LIST

The introduction to this series (Hiscock, 1974) includes a list of abbreviations and terms and a map showing the location of the sites.

The names of those responsible for observations, collections and identifications are abbreviated as follows: A. Andrews (AA), G. Archer (GA), R. J. A. Atkinson (RJAA), N. J. Bowden (NJB), C. R. Boyden (CRB), G. H. Brown (GHB), D. Cartlidge (DC), P. Drynda (PD), J. D. George (JDG), R. G. Hartnoll (RGH), L. A. Harvey (LAH), K. Hiscock (KH), S. Hiscock (SH), R. Hoare (RH), Diving Investigation 1971 (DI), D. J. W. Lane (DJWL), C. G. Moore (CGM), P. G. Moore (PGM), B. E. Picton (BEP), R. S. V. Pullin (RSVP), M. W. Robins (MWR), P. J. Schembri (PJS), N. Thomas (NT), D. I. Williamson (DIW), J. Wilson (JW).

With the exception of Harvey's material, most of the remaining species are retained in the Lundy collection and identification of all such preserved material has been checked by the authors. In addition to the records unique to Harvey, we have not examined *Callianassa tyrrhena*, *Dromia personata* and *Inachus dorsettensis* since the material was not retained but the observers are confident of their identifications.

Identification has been achieved using Ingle (1980) for brachyurans, Smaldon (1979) for natantians both cross-referenced with Allen (1967) and Zariquiey Alvarez (1968) which were of particular relevance in identifying astacurans, palinurans and anomurans. Allen (1967) also contains a key for euphausiids. The classification system used follows that employed in these works, placed in the overall scheme developed by Manton (1973, 1977) and outlined by Webb *et al* (1978) and George and George (1979). Lebour (1928) cross-referenced with Ingle (1980) was used to identify some young crab stages, Christiansen (1969, 1973) and Ingle (1977) to check spider crab identifications and Palmer (1927) to check some swimming crab identifications.

The identification of some of the shells occupied by hermit crabs was undertaken by Miss C. M. Payne (Royal Scottish Museum, Edinburgh).

Synonyms for euphausiids are listed in Mauchline and Fisher (1969) and for decapods in Zariquiey Alvarez (1968), Smaldon (1979) and Ingle (1980) the nomenclature used being taken from these texts. Synonyms are only included here where they are used in a referenced key or paper and are in common usage.

In addition to the examination of preserved material and record cards, data on the distribution of certain species around Lundy has been extracted from Anon, 1948 (Harvey), Harvey (unpublished notes, 1950, 1951), Atkinson (1975), Hoare and Wilson (1976), Atkinson, Pullin and Dipper (1977) and Hiscock (1970, 1981 in prep.).

In the lists, priority is given to site, proceeding clockwise around the island from Rat Island (S), with records listed chronologically within sites.

Where an abundance scale is used, its interpretation is as follows: abundant, one or more per 0.1m²; common, one or more per m²; frequent, less than 1 per m² but more than 20 individuals observed; occasional, 3-20 individuals observed; rare, one or two observed.

Phylum	CRUSTACEA
Class	MALACOSTRACA
Superorder	EUCARIDA
Order	EUPHAUSIACEA
Family	EUPHAUSIIDAE

Nyctiphanes couchii (Bell, 1853)

In plankton net samples, July 1976, 1977 and Aug. 1978 and in stomachs of the Red Band-fish, *Cepola rubescens* July 1975 and 1976. Mostly larvae but some adults. Samples from east coast (RJAA, RSVP/DIW).

Meganyctiphanes norvegica (M. Sars, 1857)

Recorded in list of littoral fauna, site unspecified (LAH, 1950).

Order DECAPODA
Suborder NATANTIA
Infraorder CARIDEA

Caridean larvae were taken in small numbers in plankton tows and from the stomachs of the planktivorous Red Band-fish, *Cepola rubescens* during July, 1975, 1976, 1977 and Aug. 1978 but few were identified further (RJAA, RSVP/DIW).

Superfamily PALAEMONOIDEA
Family PALAEMONIDAE

Palaemon serratus (Pennant, 1777)

COMMON PRAWN

Leander serratus: Harvey, 1950

The Gates, littoral, 1948-1950 (LAH), in low shore pools, 8.7.75 (RJAA), 1.7.80 (RJAA/PJS), infralittoral on submerged rock and stones amongst *Laminaria* 1.7.80 (RJAA); off Lametry Beach (51°9.4'N, 4°39.5'W), 9m, on stones and rock amongst *Laminaria hyperborea*, 1.7.80 (RJAA); Rattles Anchorage, 15m, 1.7.80 amongst stones and algae (RJAA); Kittiwake Gully, 9m, on sand with stones, 12.8.79 (DC); Ladies Beach, littoral, under stones, 1948-1950, 'often in numbers' (LAH). At least 10 specimens seen at each site attributed to RJAA.

Palaemon (Paleander) elegans Rathke, 1837

PRAWN

Leander squilla: Harvey, 1950

The Gates, littoral in gully, Aug. 1948 and under stones, 1948-1950 (LAH).

Superfamily ALPHEOIDEA
Family ALPHEIDAE

Athanas nitescens (Leach, 1814)

Ladies Beach, littoral, under stones, 1948-1950, 'often in numbers' (LAH).

Family HIPPOLYTIDAE

Eualus pusiolus (Kroyer, 1844)

Knoll Pins South, 22 m, amongst undergrowth from horizontal granite substratum, 10.7.75, 10 specimens (KH/RJAA, PJS). Zoeae of genus *Eualus* present in plankton, Aug. 1978 (RJAA, RSVP/DIW).

Hippolyte varians Leach, 1814

CHAMELEON SHRIMP

Lee Rocks, 17 m, 20.7.76, 1 specimen (NJB); Brazen Ward, 2-16 m, in undergrowth, July 1976, 13 specimens (KH/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m, in undergrowth, June 1980, 2 specimens (KH, DC/RJAA, PJS); Halfway Wall Bay, 1 in Red Band-fish (*Cepola rubescens*) stomach, fish caught at 13 m, July 1976 (RJAA, RSVP/DIW); Ladies Beach, littoral, under stones, 1948-1950, 'often in numbers' (LAH).

Thorulus cranchii (Leach, 1817)

Brazen Ward, 16 m, in undergrowth, July 1976, 1 specimen (KH/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m in undergrowth, June 1980, 1 specimen (KH, DC/RJAA, PJS); Knoll Pins South, 22 m, in undergrowth on horizontal granite, 10.7.75, 1 ovigerous female (KH/RJAA, PJS); Quarter Wall Bay, 14.7.75, Rat Island (N), 15.7.75, 1 ovigerous female from a *Laminaria hyperborea* holdfast at 3 m at each site (PGM/RJAA, PJS).

Family PROCESSIDAE

Processa Leach, 1815 sp.

One zoea from east coast plankton, Aug. 1978 (RJAA, RSVP/DIW).

Superfamily PANDALOIDEA
Family PANDALIDAE

Pandalina brevirostris (Rathke, 1843)

Brazen Ward, 8-16 m, in undergrowth, July 1975, 5 specimens (KH/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m, in undergrowth, June 1980, 3 specimens (KH, DC/RJAA, PJS); Knoll Pins South, 22 m, in undergrowth from horizontal granite, 10.7.75, 7 specimens (KH/RJAA, PJS); Three Quarter Wall Bay, 14 m, from sandy gravel with mud, 3.7.80, 1 specimen (JW/RJAA, PJS); Rat Island, 11 m, in undergrowth on west-facing vertical slate, 12.7.75, 3 specimens (KH/RJAA, PJS).

Pandalus montagui Leach, 1814

AESOP PRAWN

MV Robert (51°11.2'N, 4°38.7'W), 14 m, in undergrowth, June 1980, 9 specimens (KH, DC/RJAA, PJS); Quarry Bay, c. 15 m, 2. 7. 80, 1 specimen (RJAA, PJS); Landing Bay, c. 10 m, 2. 7.80, 2 specimens (RJAA, PJS).

Superfamily CRANGONOIDEA
Family CRANGONIDAE

Crangon allmani Kinahan, 1857

Quarter Wall Bay, c. 12 m, 2.7.80, 1 specimen (RJAA, PJS).

Crangon crangon (Linnaeus, 1758)

COMMON SHRIMP

Crangon vulgaris: Harvey, 1950; Marine Biological Association, 1957; Crothers, 1966.

Site unspecified, littoral, 1948-1950 (LAH); Gannets' Bay, 15 m, on mud with stones, 30.6.80, 1 specimen (JW/RJAA, PJS); offshore Quarry Bay (51°10.5'N, 4°39.3'W), 24 m, 28.7.78, 1 specimen (JW/RJAA, PJS); Landing Bay, 10 m, on sand, 25.6.80, 1 specimen (JW/RJAA, PJS), 2 specimens (RJAA, PJS).

Suborder REPTANTIA
Infraorder ASTACURA
Superfamily NEPHROPSOIDEA
Family NEPHROPIDAE

Homarus gammarus (Linnaeus, 1758)

LOBSTER

Homarus vulgaris: Harvey, 1950; Marine Biological Association 1957; Crothers, 1966.

Present in small numbers all round island with some taken commercially (Hiscock, 1970 and pers. comm.). The few scientific records are summarized below, each a single sighting.

Rat Island (S), 2 m, 7.6.73 (KH); Lee Rocks and E., 19-32 m, 19.7.78 (DC); Rattles Anchorage, c. 15 m, 5.8.71 (KH); Jenny's Cove, 22 m, 27.7.71 (KH), 10 m, 13.8.79 (KH); Seals Rock, 34 m, 28.7.71 (DI); Brazen Ward, 13 m, 29.7.74

(KH); Knoll Pins, 20 m, Aug. 1974, Aug. 1978, 18 m, 3.7.80 (RJAA). Occasional small specimens have been recorded in deep holes littorally, e.g. Ladies Beach between 1948 and 1950 (LAH).

Infraorder PALINURA
Superfamily SCYLLAROIDEA
Family PALINURIDAE

Palinurus elephas (Fabricius, 1787)

CRAWFISH OR SPINY LOBSTER

Palinurus vulgaris: Harvey, 1950; Marine Biological Association 1957; Crothers, 1966.

Occurs all round island with lowest numbers off east coast, commoner but distribution patchy off south coast and most numerous off Black Rock where it has been taken commercially (Hiscock, 1970 and pers. comm.). One to 3 specimens recorded on each date at the following sites with depths ranging from 10 to 30m.

Site and number unspecified, 1948-1950 (LAH); Lee Rocks, 26.7.71 (DJWL), 13.8.72 (KH); Rattles Anchorage, 5.8.71 (DJWL), 1.7.80 (RJAA); Black Rock, summer 1970, 7.8.71 (KH); Needle Rock, 14.8.72 (KH); Jenny's Cove, 27.7.71 (RH), 8.8.71 (RJAA); St. James's Stone, 9.9.73, pair mating (KH); Seals Rock, 28.7.71 (DD); Gannets' Rock (N), 1.8.71 (JDG); Knoll Pins, 7.8.71 (RJAA); Quarry Bay, 17.7.78 (DC).

Superfamily THALASSINOIDEA
Family CALLIANASSIDAE

Zoeae of the genera *Callianassa* and *Upogebia* in plankton, July 1975, 1976, 1977 and Aug. 1978 including records from stomachs of the planktivorous Red Band-fish, *Cepola rubescens* (RJAA, RSVP/DIW).

Callianassa (Callichirus) tyrrhena (Petagna, 1792)

Callianassa laticauda: Allen, 1967; Hoare and Wilson, 1976.

Halfway Wall Bay, 16 m, burrowing in sandy mud, July 1975, 1 specimen (RH, JW)

Upogebia deltaura (Leach, 1815)

Gannets' Bay, 16 m, in mud with stones, 30.6.80, 1 specimen; Three Quarter Wall Bay, 14 m, in sandy gravel with mud, 3.7.80, 2 specimens; adjacent to MV Robert (51°11.2'N, 4°38.7'W), 26 m, 23.6.80, 2 specimens; 50 m S. Gull Rock, 15 m, 29.6.80, 1 specimen; offshore Quarry Bay (51°10.4'N, 4°38.7'W), 26 m, 23.6.80, 2 specimens; Landing Bay, 13 m, 4.7.80, 1 specimen. Unless otherwise stated, substratum in which this species burrowed was muddy gravel with stones (JW/RJAA, PJS — all records). Probably abundant in these deposits.

Upogebia stellata (Montagu, 1808)

Gannets' Rock 15 m, in sandy mud, July 1975, 5 specimens (RH, JW); Three Quarter Wall Bay, 12 m, in muddy sand, July 1975, 5 specimens (RH, JW); Gull Rock, 14 m, in sandy mud, July 1975, 5 specimens (RH, JW); Halfway Wall Bay, 21 m, muddy gravel, 26.7.78 (JW, KH), 19 m, 30.7.78, 1 specimen (JW/RJAA, PJS); offshore Quarry Bay (51°10.5'N, 4°39.3'W), 25 m, sandy shelly mud, 26.7.78 (JW, KH). Constructs burrows and may be common in muddy substrata.

Infraorder ANOMURA
Superfamily PAGUROIDEA
Family PAGURIDAE

HERMIT CRABS

There are records of '*Pagurus* sp./spp.' for many sites along the east coast and for near Lee Rocks and for Long Roost. The specimens were not retained by the observers and could therefore comprise any of the hermit crab species recorded here and possibly others. Most were observed in 1978 and 1979 for which Hiscock in prep. stated that they were occasional to common on sediments and rare on rock.

Of those collected, some hermit crabs lost their shells during sampling. However, where the shell was still occupied its identity is given.

Pagurid zoeae and megalopae occurred in the plankton July 1975, 1976, 1977 and Aug. 1978 including records from stomachs of the planktivorous Red-Band-fish, *Cepola rubescens*. On the occasions when identification was taken further the genus was *Anapagurus* (RJAA, RSVP/DIW).

Pagurus bernhardus (Linnaeus, 1758)

COMMON HERMIT CRAB

Records predominately from east coast particulate substrata at depths ranging from 10 to 15 metres below C.D., 19 m, at Jenny's Cove, with Harvey providing littoral records.

Jenny's Cove, 2.7.80 (JW/RJAA, PJS); Gannets' Bay, 30.7.71 (KH), July 1975 (RH, JW); Three Quarter Wall Bay, July 1975 (RH/JW), 3.7.80 (JW/RJAA, PJS); Knoll Pins, 24.7.71 (DI); Halfway Wall Bay, July 1975 (RH, JW), July 1977 (CGM); Quarry Bay, 6.8.71 (JDG, KH), 14.8.72 (KH); Ladies Beach, littoral, 1948-1950 (LAH); Landing Bay, 4.8.71 (RH), 29.6.80 (RJAA, PJS).

The shells occupied were *Turritella communis*, *Gibbula cineraria*, *Ocenebra erinacea* and other shells probably misidentified by the observers who recorded them as *Buccinum undatum* but didn't retain the specimens. *B. undatum* was not seen at Lundy by the authors and it is not recorded in the prosobranch species list (Picton, 1978). We suspect that *Nassarius reticulatus* has been misidentified as small *B. undatum*. *N. reticulatus* is recorded in the area and is large enough to cause confusion, particularly if the shell was identified *in situ* where its size would be enhanced by refraction.

Pagurus cuanensis Bell, 1846

Brazen Ward, 20 m, 31.7.69, 1 specimen in *Dentalium entalis* shell (KH/RJAA, PJS), Om, 17.7.76, 1 specimen (KH/RJAA, PJS).

Pagurus prideauxi Leach, 1815

STRAWBERRY CRAB

Associated with the Cloak Anemone, *Adamsia palliata*. Numerous records off, and occasionally on, south and east coasts at depths extending to 23 m, below C.D. The sites from which the species has been recorded are The Gates, Lee Rocks, Rattles Anchorage, Gannets' Rock Pinnacle (S), Brazen Ward, 1 km E. Brazen Ward, Knoll Pins, Knoll Pins South, Gull Rock, 50 m S. Gull Rock, Halfway Wall Bay, Quarry Bay, Lundy Roads, Ladies Beach. The substratum is usually particulate and often muddy. The species was recorded littorally by LAH, 1948-1950, and the remaining sublittoral records were added almost annually from 1970 to 1980 by DC, JDG, KH, RH, DI and JW.

The prosobranch shell occupied by the hermit crab was not visible in large specimens since they were enveloped by *A. palliata*. However, the shell was easily visible in small specimens where the anemone was much smaller and did not envelop the shell. Such shells were *Nassarius incrassatus* in all but one case where the occupied shell was *Calliostoma zizyphinum*.

Anapagurus laevis (Bell, 1846)

Dead Cow Point, 14-18 m, July 1977, 2 specimens (KH, DC/RJAA, PJS); Jenny's Cove, 19 m, on shell sand, 2.7.80, 1 specimen (JW/RJAA, PJS); Gannets' Bay, 15 m, on mud with stones, 30.6.80, 1 specimen in *Tricolia pullus* shell (JW/RJAA, PJS); Brazen Ward, 10-16 m, July 1976, 6 specimens — 4 in

Nassarius incrassatus shells, 1 in *Rissoa parva* shell (KH/RJAA, PJS): adjacent to MV Robert (51°11.2'N, 4°38.7'W), 21 m, on muddy gravel with stones, 23.6.80, 1 specimen (JW/RJAA, PJS); 50 m, S. Gull Rock, 15 m, on muddy gravel, 29.6.80, 3 specimens — 2 in *N. incrassatus* shells (JW/RJAA, PJS); offshore Quarry Bay (51°10.5'N, 4°39.2'W), 24 m, 1 specimen (JW/RJAA, PJS); Landing Bay, 12 m, on muddy gravel with stones, 4.7.80, 1 specimen (JW/RJAA, PJS).

Anapagurus hyndmanni (Bell, 1846)

Numerous records and 67 specimens examined of which 41 occupied *Nassarius incrassatus* shells, 2 occupied *Natica alderi* shells, 1 occupied a *Turritella communis* shell, 1 occupied an *Alvania punctura* shell and the remaining 22 had lost their shells. Specimens have been collected by the following workers — GA, RJAA, DC, KH, DJWL, PJS and JW, from mud, sand, gravel and undergrowth on bedrock at the following sites between 1975 and 1980.

Off Lametry Beach, Dead Cow Point, Jenny's Cove, Long Roost, Brazen Ward, Three Quarter Wall Bay, Knoll Pins South, 50 m S. Gull Rock, Halfway Wall Bay, Quarry Bay.

Depths varied from 6 m to 22 m below C.D. Of the specimens examined 16 were ovigerous females.

Superfamily GALATHEOIDEA
Family GALATHEIDAE

SQUAT LOBSTERS

Galatheid zoeae in plankton, July 1975, 1976, 1977 and Aug. 1978 including records from stomachs of planktivorous Red Band-fish, *Cepola rubescens* (RJAA, RSVP/DIW).

Munida rugosa (Fabricius, 1775)

Munida bamffica: Marine Biological Association, 1957; Crothers, 1966; Allen, 1967.

Jenny's Cove, 42 m, in crevices at sediment/rock interface, 2.7.80 (KH); Gannets' Rock, 20 m, in crevices at sediment/rock interface, 30.6.80 (RJAA); Gannets' Bay, 12 m, in vacated *Cepola rubescens* (Red Band-fish) burrows, July 1975 (RJAA, RSVP); Halfway Wall Bay, 10-20 m, in vacated *C. rubescens* borrows, July 1976, July 1977, Aug. 1978 (RJAA, CGM, RSVP), 21 m, under stones on muddy gravel and shell substratum and in burrows of crab *Goneplax rhomboides*, 26.7.78 (KH); also in *G. rhomboides* burrows at Quarry Bay, 17 m, sandy mud, Aug. 1974 (RJAA), and offshore Quarry Bay, 25 m, sandy shelly mud, 27.7.78 (NT); offshore Landing Bay, c. 25 m, under small boulders and pebbles, 21.7.78 (DC).

Galathea dispersa Bate, 1859

Off Lametry Beach (51°9.4'N, 4°39.5'W), 9 m, under stones in *Laminaria hyperborea* zone, 1.7.80, 1 specimen collected but several seen (RJAA); Lee Rocks, 26.7.71, 1 specimen (DJWL); North Light, W. of steps, infralittoral fringe, in scrapings from cave wall, 27.6.80, 1 specimen (KH/RJAA, PJS).

Galathea intermedia Lilljeborg, 1851

S. of Lee Rocks (51°9.3'N, 4°39.3'W), 36 m, 12.9.72, 1 specimen (DJWL); offshore Quarry Bay (51°10.4'N, 4°39.'W), 19 m, 18.7.78, 1 specimen (KH/RJAA, PJS).

Galathea nexa Embleton, 1834

Lee Rocks, 17 m, 27.6.76, 3 specimens (KH/RJAA, PJS); Gannets' Rock Pinnacle (N), 35 m, under stone, 7.8.79 (KH/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m, 25.6.80, 1 specimen (JW/RJAA, PJS); Knoll Pins South, 22 m, in undergrowth on horizontal granite, 10.7.75, 3 specimens, (KH/RJAA, PJS).

Galathea squamifera Leach, 1814

Seals hole (OS Grid Ref. 136435), infralittoral fringe, 20.7.70, 2 specimens including 1 ovigerous female (KH/RJAA, PJS); on granite shores, particularly Ladies Beach, 1948-1950 (LAH).

Galathea strigosa (Linnaeus, 1767)

Brazen Ward, 12 m, 17.7.76, 2 specimens (KH/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m, June 1980, 1 specimen (DC, KH/RJAA, PJS).

Family PORCELLANIDAE

Porcellanid zoeae and magalopae in plankton July 1975, 1976, 1977 and Aug. 1978, including records from stomachs of the Red Band-fish, *Cepola rubescens*. In the cases where identification was taken further, the species was *Pisidia longicornis* (RJAA, PJS/DIW).

Porcellana platycheles (Pennant, 1777)

BROAD-CLAWED PORCELAIN CRAB

The Gates, littoral, under slate boulders in gullies, 1948-1950 (LAH) and under low shore boulders 1.7.80 (RJAA, PJS); Ladies Beach, under low shore boulders, 1948-1950 (LAH).

Pisidia longicornis (Linnaeus, 1767)

LONG-CLAWED PORCELAIN CRAB

Porcellana longicornis: Marine Biological Association 1957; Crothers, 1966; Allen, 1967.

This species was found in large numbers all around the island, littorally and particularly sublittorally, the deepest record being from 35 m. 326 specimens have been collected, almost all in June, July and August and of these 16 were ovigerous females. The larvae are numerous in the summer plankton. The habitats from which the species has been taken are diverse: under littoral and sublittoral boulders and stones, in undergrowth on sublittoral bedrock, wrecks and cables, eulittorally amongst alga *Corallina officinalis*, and in Laminarian holdfasts.

The sites from which the species has been recorded are Rat Island (S) shore, The Gates shore, Lametry Beach, off Lametry Beach, Lee Rocks, Rattles Anchorage, off Montagu Steps, Goat Island shore, Dead Cow Point, Jenny's Cove shore, off Long Roost, Gannets' Rock (N) shore, Gannets' Rock, Gannets' Rock Pinnacle, Brazen Ward shore, off Brazen Ward, MV Robert, Knoll Pins South, Quarry Beach, Quarter Wall Bay, off White Beach, Ladies Beach, Landing Bay Cable, Rat Island (N) shore, SS. Carmine Filomena.

The list of observers is RJAA, NJB, DC, KH, LAH, SH, PGM and JW with specimens collected from 1948-1950 and in most years between 1970 and 1980.

Infraorder BRACHYURA

Brachyuran zoeae and magalopae common in plankton, July 1975, 1976, 1977 and Aug. 1978 including records from stomachs of the planktivorous Red Band-fish, *Cepola rubescens*. Those larvae identified further are indicated in the appropriate sections (RJAA, RSVP/DIW).

Section	DROMIACEA
Superfamily	DROMIOIDEA
Family	DROMIIDAE

Dromia personata (Linnaeus, 1758)

SPONGE CRAB

Dromia vulgaris: Marine Biological Association, 1957; Crothers, 1966; Allen, 1967.

Knoll Pins; 20 m, 21.8.70, 1 specimen with covering of sponge *Pachymatisma johnstonia*, 2.8.71, 1 ovigerous female in hole in cliff (KH).

Section	OXYSTOMATA
Superfamily	CALAPPOIDEA
Family	LEUCOSIIDAE
Subfamily	EBALIINAE

Megalopae of genus *Ebalia* present in stomachs of planktivorous Red Band-fish, *Cepola rubescens*, July 1975 and with zoeae in plankton July 1976, 1977, Aug. 1978 (RJAA, RSVP/DIW).

Ebalia tuberosa (Pennant, 1777)

Rattles Anchorage, 15 m, from clean sand and gravel, 24.6.80, 1 specimen (JW/RJAA, PJS), 30 m, 1 specimen (date and observer unknown); Dead Cow Point, 14-16 m, from undergrowth, July 1977, 3 specimens (DC, KH/RJAA, PJS); Jenny's Cove, 19 m, from shell sand, 2.7.80, 6 specimens (JW/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m, from undergrowth, June 1980, 1 specimen (DC, KH/RJAA, PJS); adjacent to MV Robert, 21 m, from muddy gravel with stones, 23.6.80, 1 specimen (JW/RJAA, PJS); 50 m S. Gull Rock, 15 m, from muddy gravel, 29.6.80, 1 specimen (JW/RJAA, PJS).

Ebalia tumefacta (Montagu, 1808)

Off Lametry (51°9.4'N, 4°39.5'W), 8 m, from clean coarse sand, 1.7.80, 1 specimen (JW/RJAA, PJS); adjacent to MV Robert (51°11.2'N, 4°38.7'W), 21 m, from muddy gravel with stones, 23.6.80, 1 specimen (JW/RJAA, PJS); Knoll Pins South, 22 m, from undergrowth, 10.7.75, 1 ovigerous female (KH/RJAA, PJS); off Laidies Beach, 13 m, from coarse sand with some mud, 31.7.74 (AA/RJAA, PJS).

Ebalia cranchii Leach, 1817

Goat Island, eulittoral amongst alga *Corallina officinalis*, August 1949, 1 specimen (LAH); Halfway Wall Bay, 10-20 m, from sandy mud, July 1977, several specimens (CGM); Quarry Bay, 21 m, from fine sand with some mud, 1.8.74, 1 specimen (JW/RJAA, PJS); Long Roost, 15 m, coarse sand, 25.6.80, 1 specimen (JW/RJAA, PJS).

Section	BRACHYRHYNCHA
Family	PORTUNIDAE
Subfamily	POLYBIINAE

SWIMMING CRABS

Zoeae and megalopae of the genus *Liocarcinus* present in the plankton, July 1975, 1976, 1977, Aug. 1978 including records from stomachs of the planktivorous Red Band-fish, *Cepola rubescens* (RJAA, RSVP/DIW).

Liocarcinus puber (Linnaeus, 1767)

FIDDLER OR VELVET CRAB

Portunus puber: Palmer, 1927; Harvey, 1950; Marine Biological Association, 1957.

Macropipus puber: Crothers, 1966; Allen, 1967.

Rat Island (S), c. 3 m, 1.6.72, 7.6.73, common in crevices (KH); The Gates, littoral in gullies, August 1948-1950 (LAH), under stones, 5.8.71 (CRB), 1.8.70, abundant under shore boulders and common in infralittoral fringe under boulders and stones amongst *Laminaria* (RJAA, PJS); Lametry Beach, under stones, 1.7.80, frequent (PJS); off Lametry Beach (W), 11.8.79, 13.8.79, rare (KH), off Lametry Beach (51°9.4'N, 4°39.5'W), 9 m, on rock amongst *Laminaria hyperborea*, 1.7.80, common (RJAA); Lee Rocks and E., 26.7.71, 19.7.78, rare (DC, KH); Rattles Anchorage, 15 m, amongst stones, 5.8.71, rare (KH), 20.7.78, 29.7.78, rare (PD, KH, NT), 1.7.80, occasional (RJAA); off Needle Rock, c. 24 m, 14.8.72, 1 specimen (KH); Jenny's Cove, 42 m, 2.7.80, 1 specimen (DC, KH); Seals Rock, 30 m, on boulder slope, 28.7.71 (DI), c. 22 m, 5.7.74 (KH); MV Robert (51°11.2'N, 4°38.7'W), 14 m, 10.8.79, rare (DC); Knoll Pins, c. 15 m, 6.7.73, pair in hole (KH); Knoll Pins South, 23 m, 10.8.74, 2 specimens (KH); Gull Rock, 15 m, on low rock outcrops, 31.7.71 (KH); Ladies Beach, under boulders 1948-1950 (LAH); Rat Island (N), c. 5 m, 24.7.71, 9.6.73, rare (KH); Mouse Island, 9.6.73, 24.7.78, rare (KH).

Liocarcinus pusillus (Leach, 1815)

Portunus pusillus: Palmer, 1927; Marine Biological Association, 1957.

Macropipus pusillus: Crothers, 1966; Allen, 1967.

Rattles Anchorage, 15 m, from clean sand and gravel, 24.6.80, 2 specimens (JW/RJAA, PJS); Three Quarter Wall Bay, 14 m, from sandy gravel with mud, 2.7.80, 1 specimen (JW/RJAA, PJS); offshore Quarry Bay (51°10.5'N, 4°39.3'W), 24 m, 28.7.78, 1 specimen (JW/RJAA, PJS); August 1971, 1 specimen, no details (KH, CRB/RJAA, PJS).

Liocarcinus depurator (Linnaeus, 1758)

Portunus depurator: Palmer, 1927; Marine Biological Association, 1957.

Macropipus depurator: Crothers, 1966; Allen, 1967.

Rattles Anchorage, 15 m, on sand, 1.7.80 (RJAA); Gannets' Rock Bank, 26.7.78 and Gannets' Rock Pinnacle, 28.7.78, on sand, occasional to frequent (KH, JW); Gannets' Bay c. 17 m, on muddy sand, 3.7.80, occasional (RJAA) 1 km E. Brazen Ward, on sand, 21.7.80, occasional to frequent (JW); Halfway Wall Bay, 10-20 m, occasional on muddy deposits, July 1977 (CGM), 3.7.80 (RJAA).

Records of *Macropipus* sp. from the east coast and particularly Halfway Wall Bay during most years from 1974 to 1980 may well be *M. depurator* but confusion with *M. holsatus* which is also known from this site is possible and none were retained for checking.

Liocarcinus holsatus (Fabricius, 1798)

Portunus holsatus: Palmer, 1927; Marine Biological Association 1957.

Macropipus holsatus: Crothers, 1966; Allen, 1967.

Dead Cow Point, 2-16 m, from undergrowth, July 1977, 18 juveniles (DC, KH/RJAA, PJS); Brazen Ward, 0-12 m, from undergrowth, July 1976, 5 juveniles (KH/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m, from undergrowth, June 1980, 5 juveniles (DC, KH/RJAA, PJS); Halfway Wall Bay, c. 20 m, on muddy substratum, 3.7.80, 1 large adult with parasitic barnacle *Sacculina carcini* (RJAA, PJS).

Subfamily CARCININAE

Carcinus maenas (Linnaeus, 1758)

SHORE CRAB

The Gates, littoral, under stones in gullies, 1948-1950 (LAH), few under littoral stones, 1.7.80 (RJAA, PJS); Lametry Beach, infralittoral fringe in *Laminaria* holdfasts, Aug. 1949 (LAH), littoral under stones, 1.7.80, occasional

(RJAA, PJS); Gannets' Bay, littoral, under stones, 30.6.80, frequent (RJAA, PJS); Brazen Ward, 0-4 m, July 1976, in undergrowth, 8 small specimens (KH/RJAA), littoral under stones, 30.6.80, frequent (RJAA, PJS); Quarry Beach, infralittoral fringe in *Laminaria* holdfasts, Aug. 1949 (LAH), under stones around MLWN, 10.7.75, frequent (KH), 2.7.80 (SH/RJAA, PJS); Ladies Beach, littoral, amongst alga *Jania rubens*, Aug. 1949, under stones, 1948-1950, in *Laminaria* holdfasts, Aug. 1949 (LAH); off Ladies Beach, 13 m, 31.7.74, 1 specimen (AA/RJAA, PJS); Landing Bay, c. 10 m, 2.7.80, 1 specimen (RJAA, PJS); Rat Island (N), infralittoral fringe in *Laminaria* holdfasts, Aug. 1949 (LAH).

Zoae and megalopae present in the plankton, July 1975, 1976, 1977 and Aug. 1978 including records from stomachs of the planktivorous Red Band-fish, *Cepola rubescens* (RJAA, RSVP/DIW).

Family ATELECYCLIDAE

Atelecyclus rotundatus (Olivi, 1792)

Unless otherwise stated, one or two adult specimens recorded on offshore sediments at each of the following sites -

Dead Cow Point, 12 m, in undergrowth, July 1977, 1 juvenile (DC, KH/RJAA, PJS); Gannets' Rock Bank, 26.7.78 (JW); Gannets' Rock Pinnacle (S), 28.7.78 (KH); Three Quarter Wall Bay, 12 m, on muddy sand, July 1975, 5 juveniles (RH, JW); Halfway Wall Bay, 17 m, sandy mud, July 1977 (RJAA), 26.7.78 (KH); Quarry Bay, E. and SE., 12-24 m, muddy sand and fine sand, 18.7.78 (KH/RJAA, PJS), 26.7.78 (JW), 27.7.78 (PD, KH), 28.7.78 (NT) (JW/RJAA, PJS).

Megalopae present in stomachs of Red Band-fish, *Cepola rubescens*, July 1975 (RJAA, RSVP/DIW).

Family CANCRIDAE

Cancer pagurus Linnaeus, 1758

EDIBLE CRAB

Occurs all round island with some taken commercially. Sublittorally, up to 5 usually large specimens per dive have been seen though most sightings were of one or two crabs. Records are from a wide variety of habitats — on and sometimes partially buried in muds, sands and gravels, on bedrock, under stones and boulders, in undergrowth, in *Laminaria* holdfasts and often in crevices at the sediment/rock interface, down to a depth of 42 m below C.D. (off Jenny's Cove). Littorally, crabs are mostly small, occurring beneath stones and are sometimes numerous. The sites are as follows: —

Rat Island (S), The Gates shore, Lametry Beach, off Lametry Beach, Lee Rocks, Rattles Anchorage, Black Rock, between halftide Rock and Battery Point, Dead Cow Point, Jenny's Cove, Virgins Spring, off Kittiwake Gully, Seals Rock, Gannets' Rock (N) shore, Gannets' Rock, Gannets' Rock Pinnacle, Gannets' Bay, Brazen Ward shore and offshore, MV Robert, Knoll Pins, Knoll Pins South, Gull Rock, Halfway Wall Bay, Quarry Beach, Quarry Bay, 1 km off Quarry Bay, Rat Island (N) shore and offshore, SS Carmine Filomena.

Observers are RJAA, CRB, DC, PD, JDG, KH, LAH, RH, DI, CGM, BEP, PJS, NT and JW with observations from 1948-1950, 1971-1980.

Family GONEPLACIDAE

Subfamily GONEPLACINAE

Goneplax rhomboides (Linnaeus, 1758)

Gannets' Bay, July 1975, 30.6.80, 3.7.80 (ovigerous female), 12 m, burrow density in mud c. 1/m² (RJAA, RSVP), July 1975, 3.7.80, 15 m, burrows present in muddy sand (RJAA, RH, JW); burrows noted as frequent or common in mud or muddy sand at the following sites — Gannets' Rock Bank, 26.7.78 (KH, JW); Gannets' Rock Pinnacle (S), 28.7.78 (KH); Gannets' Rock (S), 19.7.78,

29.7.78 (PD); Halfway Wall Bay (N), 23.7.78 (DC, JW); Halfway Wall Bay, 26.7.78 (KH); Halfway Wall Bay (S), 12.8.79 (DC, KH); Quarry Bay, 13 m, 6.8.71 (JDG), 18.7.78 (KH); 1 km E. Quarry Beach, 26.7.78 (KH, JW); off White Beach, 18.7.78, 24.7.78 (DC, KH). More detailed information exists for some of these sites — Halfway Wall Bay, 10-20 m, burrows noted as common in July 1976 and July 1977, and in Aug. 1978 the burrow density in a mapped mud area of 100 m² was 1.56/m² (RJAA, RSVP); Quarry Bay, 17 m, Aug. 1974, burrow density in mapped mud area of 96 m² was 0.93/m² (RJAA).

Family XANTHIDAE

Pilumnus hirtellus (Linnaeus, 1761)

HAIRY CRAB

Recorded under littoral stones and boulders (b) (RJAA, CRB, LAH, PJS), in Laminarian holdfasts (L) samples from the shore at low tide (LAH), in *Laminaria hyperborea* holdfasts (Lh) sampled sublittorally at 3 m, (PGM/RJAA, PJS) and amongst sublittoral undergrowth (u) on rock at depths extending at 17 m, (DC, KH/RJAA, PJS) at the following sites: —

Rat Island S. (u), The Gates (b), Lametry Beach (b, L), Goat Island (L), Dead Cow Point (u), Gannets' Rock and N. (u), Brazen Ward (u), MV Robert (u) Quarry Beach (L), Quarter Wall Bay (Lh), Ladies Beach (L, b), Rat Island N. (Lh).

LAH's records were from 1948-1950, the remainder from most years between 1971 and 1980. Of 75 specimens examined, all collected in June, July and August, 3 were ovigerous females.

Xantho pilipes A. Milne Edwards, 1867

Xantho hydrophilus: Harvey, 1950.

The Gates, littoral, under stones, Aug. 1950 (LAH).

Xantho incisus Leach, 1814

Xantho floridus: Allen, 1967.

The Gates, littoral, under slate boulders in gully, Aug. 1948 (LAH); Ladies Beach, littoral, under stones, Aug. 1950 (LAH).

Section	OXYRHYNCHA
Family	MAJIDAE
Subfamily	OREGONIINAE

Hyas coarctatus Leach, 1815

Site unspecified but probably The Gates or Ladies Beach, littoral, Aug. 1950 (LAH); Dead Cow Point, sublittoral but depth unknown, July 1977, 1 juvenile (DC, KH/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m, in undergrowth June 1980, 2 specimens (DC, KH/RJAA, PJS).

Subfamily INACHINAE

Spider crabs assigned to *Inachus* sp. were recorded as follows but no specimens were retained for species identification.

Site unspecified but probably The Gates or Ladies Beach, littoral, Aug. 1950 (LAH); MV Robert (51°11.2'N, 4°38.7'W), 14 m, in undergrowth, 10.8.78 (DC); Halfway Wall Bay (N), 10-20 m, on level muddy gravel (DC, JW); offshore Landing Bay, 20-30 m, on sloping muddy gravel and shell, 21.7.78 (DC); Rat Island, < 10 m, on level fine sand with mud, shells and boulders, 16.7.78 (DC).

Inachus dorsettensis (Pennant, 1777)

1 km E. Brazen Ward, 19-20 m, on muddy sand with pebbles, 21.7.78, several collected (JW).

Inachus phalangium (Fabricius, 1775)

Inachus dorynchus: Allen, 1967

Gull Rock, 18 m, on rock sheltering under tentacles of anemone *Anemonia sulcata*, 6.7.75, 2 specimens (RGH); Landing Bay Cable, 6 m, 20.7.76, 4 specimens (NJB/RJAA, PJS); 1 juvenile from each of the following sites:- Rat Island (S), 10 m, summer 1977 (GHB/RJAA, PJS, RGH); Gannets' Bay, 12 m, 2.7.80 (RJAA, PJS, RGH); Quarry Bay, c. 15 m, 2.7.80 (RJAA, PJS, RGH). Confusion of these juveniles with *I. leptochirus* (no adults recorded for Lundy) remains a possibility though habitat and colouration are consistent with the identification given.

Achaeus cranchii Leach, 1817

Dead Cow Point, July 1977, 3 specimens (DC, KH/RJAA, PJS); Brazen Ward, 4-10 m, July 1976, 9 specimens (KH/RJAA, PJS); MV Robert (51°11.2'N, 4°38.7'W), 14 m, June 1980, 10 specimens (DC, KH/RJAA, PJS); Knoll Pins, 15 m, 29.7.71 (MWR/RJAA, PJS); Knoll Pins South, 22 m, 10.7.75, 2 specimens including 1 ovigerous female (KH/RJAA, PJS); Rat Island (NE), 15 m, 3.7.80, 1 specimen (KH/RJAA, PJS). All these specimens came from undergrowth on rock.

Macropodia rostrata (Linnaeus, 1761)

Landing Bay Cable, c. 5 m, 20.7.76, 1 specimen (NJB/RJAA, PJS); Landing Bay, c. 10 m, on alga *Polysiphonia elongata*, 2.7.80, 9 specimens including 2 ovigerous females (RJAA, PJS).

Macropodia linaresi Forest and Zariquiey Alvarez, 1964

MV Robert (51°11.2'N, 4°38.7'W), 14 m, in undergrowth, June 1980, 1 specimen (DC, KH/RJAA, PJS); Rat Island, 11 m, in undergrowth on W-facing vertical slate, 12.7.75, 1 specimen (KH/RJAA, PJS).

Macropodia tenuirostris (Leach, 1814)

Macropodia longirostris: Allen, 1967; Zariquiey Alvarez, 1968.

Landing Bay, c. 15 m, July 1980, 1 specimen with colony of amphipod *Jassa pusilla* amongst camouflage material attached to carapace (RJAA, PJS).

Subfamily PISINAE

[Eurynome aspera (Pennant, 1777)]

Lee Rocks and E., 20-30 m, 19.7.78 (DC); Gannets' Rock (NE), 20-30 m, 26.7.78 (DC). These records almost certainly refer to *E. spinosa*.

Eurynome spinosa Hailstone, 1835

A total of 101 specimens collected from undergrowth on rock at the following sites by (DC, KH/RJAA, PJS):

Dead Cow Point, 8-18 m, July 1977; Gannets' Rock, 10 m, 15.7.75; Brazen Ward, 0-12 m, July 1976; MV Robert (51°11.2'N, 4°38.7'W), 14 m, June 1980; Knoll Pins South, 22 m, 10.7.75; Rat Island, 10 m, 12.7.75.

One specimen in *Laminaria hyperborea* holdfast at Quarter Wall Bay, 3 m, 14.7.75 (PGM/RJAA, PJS).

Subfamily MAJINAE

Maja squinado (Herbst, 1788)

SPINY SPIDER CRAB

Recorded sublittorally from all coasts and there is a littoral record from an unspecified site (Harvey, 1950). Records are from mud, rock and sand, the deepest record being from 33 m (Gannets' Rock (S)) but many are recorded from less than 15 m. The species is not encountered in large numbers with few dives yielding more than two or three individuals.

RJAA, DC, PD, JDG, KH, RH, RGH, DI, CGM, RSVP, NT and JW have recorded the species from the following sublittoral sites between 1971 and 1980:

Rat Island (S), off Lametry Beach, Rattles Anchorage, Montagu Steps, between Haultide Rock and Battery Point, Jenny's Cove, Long Roost, Virgins Spring, Seals Rock, Gannets' Rock, N., S. and Gannets' Rock Pinnacle, Knoll Pins, Halfway Wall Bay, Quarry Bay, Quarter Wall Bay, Rat Island, Mouse Island, SS Carmine Filomena.

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