

April 22, 1834.

Joseph Sabine, Esq., Vice-President, in the Chair.

Some Notes by J. B. Harvey, Esq., Corr. Memb. Z. S., were read : they accompanied a collection of *Shells* and *Crustacea* made by the writer on the coast of Devonshire, near Teignmouth. The several specimens were exhibited.

Among them were numerous individuals of *Cypræa Pediculus*, *Cyp. bullata*, and *Cyp. Arctica*. Of the former there are two varieties, one spotted and the other without spots. The spotted variety, Mr. Harvey states, is generally smaller than the plain one, and is less produced on one side near the *apex*.

Cyp. bullata is found in the same localities as *Cyp. Pediculus*, but it may be doubted whether it is the young of that species : it is so comparatively rare, that Mr. Harvey has dredged up only six specimens of it, while he has collected more than a hundred of *Cyp. Pediculus* : he possesses, moreover, young individuals of *Cyp. Pediculus* of smaller size than specimens of *Cyp. bullata*. In the latter the whorls are more produced at the *apex*, and the shell is so delicate as to be broken by even a slight fall.

On *Cyp. Arctica* Mr. Harvey remarks, that although its size and appearance are in favour of its being a young shell, he hesitates in referring it to the immature condition of the unspotted *Cyp. Pediculus* : his principal ground for doubt is the extreme rarity of *Cyp. Arctica*. He inquires, however, whether the young animal may not, perhaps, live deeply imbedded in the sand for a certain period before it comes to the surface, and thus generally elude the search of the conchologist until its shell becomes matured ?

With the *Shells* Mr. Harvey had transmitted to the Society living specimens of *Caryophyllia Smithii*, Brod., the *Torbay Madreporæ*, whose habits were described by Mr. De la Beche in the 'Zoological Journal' a few years since : these individuals died on the journey. They are attainable only at the lowest spring tides. They may be kept alive in sea water, changed every second or third day, by feeding them with a very small piece of fresh fish scraped, and deposited with a quill upon the animal, by which it is sucked in in a manner exactly similar to that of *Polypi*. The colours of some individuals are very vivid ; and among these green, blue, and blueish grey are the most predominant. Adhering to the *Caryophyllia* is occasionally found the *Pyrgoma Anglicum*, Leach, which appears to occur in no other situation.

At the request of the Chairman, Mr. Thompson of Belfast exhibited an immature specimen of the long-tailed *Manis*, *Manis tetractyla*, Linn., for the purpose of showing that when very young,

(the present specimen being but ten inches in length,) the animal is as thoroughly armed, both with respect to scales and spines, as the full-grown one. The specimen was also considered by Mr. Thompson as interesting on account of its locality, it having been obtained in Sierra Leone.

Mr. Thompson also read the following notice of the *Cuckoo*, *Cuculus canorus*, Linn., copied from his Journal, under the date of 28th May, 1833.

“On examination of three cuckoos to-day, which were killed in the counties of Tyrone and Antrim within the last week, I found them all to be in different stages of plumage: one was mature; another (a female) exhibited on the sides of the neck and breast the reddish-coloured markings of the young bird, the remainder of the plumage being that of maturity; the third specimen had reddish markings disposed entirely over it, much resembling the plumage described by M. Temminck as assumed by ‘les jeunes tels qu’ils emigrent en automne’, (Man. d’Orn, tom. 1. p. 383), but having a greater proportion of red, especially on the tail coverts, than is specified in his description of the bird at that age. This individual proved, on dissection, to be a female, and did not contain any eggs so large as ordinary sized peas. The stomach, with the exception of the presence of some small sharp gravel, was entirely empty, and was closely coated over with hair.”

Attention was called to the stomach of one of these birds, that the hair with which it is lined might be observed. From its close adhesion to the inner surface of the stomach, and from the regularity with which it is arranged, Mr. Thompson was at first disposed to consider this hair as being of spontaneous growth; but part of the stomach having been subjected to maceration in water, and afterwards viewed through a microscope of high power, the hairs proved, to the entire satisfaction of Mr. Owen and himself, to be altogether borrowed from the *larvæ* of the *Tiger-moth*, *Arctia Caja*, Schrank, the only species found in the stomach of the bird in various specimens from different parts of the country which were examined by Mr. Thompson in the months of May and June, 1833.

Mr. Thompson also read a Catalogue, with incidental notices, of *Birds* new to the Irish Fauna. He prefaced his list by remarking that he did not bring them forward as unrecorded, without having previously consulted every work in which he was aware that the birds of Ireland are either particularly described or incidentally noticed; including the Statistical Surveys of the Irish counties, which contain, in several instances, Catalogues of the Birds that have been observed in them.

The Catalogue is as follows:

1. *Alpine Swift*, *Cypselus alpinus*, Temm. By the ‘Dublin Penny Journal’ of March 30, 1833, my attention was directed to a *rara avis*, said to have been killed at Rathfarnham, and preserved in the fine collection of birds belonging to Thomas W. Warren, Esq. On calling to

see this bird (its species not having been ascertained,) I found it to be the *Alpine Swift*, which has not before been recorded as obtained in any part of Ireland; the specimen recognised as the *Cypselus alpinus* by my friend, William Sinclair, Esq., and communicated by him to Mr. Selby for insertion in the British Fauna, having been met with off Cape Clear, at the distance of some miles from land.

Mr. Warren's specimen was received by him on the 14th of March, and was then in a perfectly fresh state.

2. *Redstart*, *Phenicura Ruticilla*, Swains. This species is recorded on the excellent authority of Robert Ball, Esq., of Dublin, who has, in the autumnal months, shot several of them in the vicinity of Youghal, co. Cork.

3. *Bearded Titmouse*, *Parus biarmicus*, Linn. Mr. William S. Wall, Bird Preserver, Dublin, who is very conversant with British Birds, assures me that he received a specimen of this species from the neighbourhood of the river Shannon a few years since.

4. *Rock Pipit*, *Anthus aquaticus*, Bechst. Common about the rocks, &c., on the seashore, in the North of Ireland.

5. *Crested Purple Heron*, *Ardea purpurea*, Linn. Of this bird there is a fine specimen in mature plumage in the collection of Mr. Warren, which I am assured was shot at Carrickmacross.

6. *Little Bittern*, *Botaurus minutus*. A specimen of this bird, shot in the county of Armagh, is preserved in the cabinet of William Sinclair, Esq., Belfast. Specimens have also been obtained in the east and south of Ireland.

7. *Night Heron*, *Nycticorax Europæus*, Steph. Of this bird I saw a specimen a few weeks since in the shop of Mr. Glennen, Bird Preserver, Dublin, which he informed me was sent him in a fresh state from Letterkenny, early in the present year.

8. * *Spoonbill*, *Platalea leucorodia*, Linn. Mr. Ball informs me, that in the autumn of 1829, three of these birds were seen in company near Youghal, and that one of them was shot. It was preserved by Dr. Green of that town, and is at present in his possession.

9. * *Green Sandpiper*, *Totanus ochropus*, Temm. Of this bird I have seen Irish specimens in several collections.

10. *Dottrel*, *Charadrius morinellus*, Linn. A specimen of this bird, which was shot near Downpatrick a few years ago, is preserved in the house of Mr. Reid, at Ballygowan Bridge (Down).

11. *Black-winged Stilt*, *Himantopus melanopterus*, Meyer. In the winter of 1823, a bird of this species was seen by Mr. Ball in the neighbourhood of Youghal.

12. *Gadwall*, *Chauliodus strepera*, Swains. Dr. Robert Graves of Dublin informed me that a specimen of this bird which I saw in his collection was shot at Wexford.

13. *Smew*, *Mergus albellus*, Linn. Of this bird I have seen specimens from different parts of Ireland.

14. *Little Auk*, *Mergulus melanoleucos*, Ray. There is a specimen of this bird in the collection of Dr. Graves, which was shot at Wexford.

15. * *Black Tern*, *Sterna nigra*, Linn. Mr. Ball has seen this bird in the month of July, for some years successively, at Roxborough, near Middleton, co. Cork.

In addition to these I may mention the

16. * *Blackcap Warbler*, *Curruca atricapilla*, Bechst., which, though stated in Rutt's Dublin to be frequent in that county, admits of some doubt, as more than one species is commonly called by the name of *Blackcap* in Ireland. On the 1st March, 1834, I saw, in the shop of Mr. Galbraith, Bird Preserver, Belfast, a fresh specimen of an adult male *Blackcap*, which had been killed (probably the day before) in the garden at Down and Connor House, co. of Down.

Other individuals of the species marked thus * have been recorded in the MS. Catalogue of the late J. Templeton, Esq.—W. T.

Mr. Thompson also stated that specimens of the true *Lestris parasiticus*, Temm., have repeatedly occurred in the Bays of Dublin and Belfast. He added, that during the great storm which took place on the 31st August, 1833, a great many specimens of the *Octopus octopodia* (which had not before been recorded as occurring on the shores of Ireland) were thrown ashore in Belfast Bay.

Mr. Owen read a Paper "On the Structure of the Heart of the *Perennibranchiate Amphibia*, or *Reptiles douteux* of Cuvier."

He briefly noticed the progressive discoveries relating to the heart of *Reptiles* which have been made since the time of Linnæus, and which have successively rendered inapplicable to the *Saurians*, *Chelonians*, and *Ophidians*, the phrase "*Cor uniloculare, uniauritum*", applied to the whole of the *Reptilia* in the '*Systema Naturæ*'. He alluded to the researches of Dr. Davy and M. Martin St. Ange on the structure of the heart in the *Caducibranchiate Amphibia*, from which it appeared that two auricles were appended to the ventricle in those *Reptiles*, as well as in the higher orders above mentioned. He then proceeded to give the results of an examination of the hearts of specimens of *Amphiuma*, Cuv., *Menopoma*, Harlan, *Proteus*, Schreib., and *Siren*, Linn. He selected the heart of the *Siren lacertina* as the subject of detailed description, considering that the genus *Siren*, in combining with persistent external *branchiæ* a limited number of extremities, exhibits the simplest form of the *Amphibious Reptile*.

The heart in this species consists of three distinct cavities, as in the higher *Reptilia*, viz. of two auricles and one ventricle. The auricles appear to form externally one large and remarkably fimbriated cavity, situated behind, and advancing forwards, on both sides of the ventricle and *bulbus arteriosus*. The venous blood is poured into a large membranous sinus by one posterior and two anterior *venæ cavae* prior to passing into the auricle. The conjoined trunk of the pulmonary veins appears also to enter this sinus, but it passes through without communicating with that cavity, and terminates in a small separate auricle, which opens into the ventricle by an orifice distinct from, but close to, the orifice of the right auricle. In the ventricle a rudimentary *septum* was noticed as affording an indication of a type of forma-

tion superior to that of *Fishes*. In the *bulbus arteriosus* a longitudinal projection appears as a commencing division of the single artery, which is given off from the ventricle.

The differences in the structure of the preceding parts, and in the origin and distribution of the different vessels exhibited by the other genera of *Perennibranchiata*, were successively noticed ; and the affinities indicated by these modifications to the *Caducibranchiate Reptiles* on the one hand, and to the *Cartilaginous Fishes* on the other, were also pointed out.

The Paper was illustrated by drawings of the structures described in it.