The Country-Side

THE COUNTRY : GARDEN : POULTRY : NATURE : WILD LIFE : ETC.

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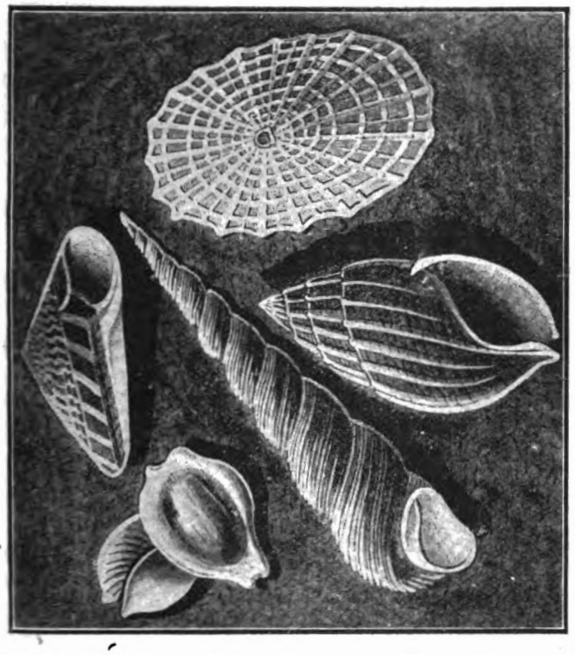
Beautiful Shells.

By JAMES SCOTT. Illustrated from Drawings by the Author.

CONCHOLOGY is a weird and unattractive word to denote the fascinating science of shells. Merely in the form of a hobby the shells deserve collection on account of their imperishable beauty.



An interesting group of shells such as are described in the article.

Among the innumerable groups perhaps the most minute ones exhibit the most diversified range of really exquisite symmetry, yet these are usually screened from the eyes of all except microscopists. Apart from diatoms, which belong to the sphere of vegetation, the smallest shells in existence are those forming in bulk, as the residue of prehistoric life, the beds of chalk and its allied strata. The living descendants of these creatures are still abundant, though their number must be considered very insignificant compared with that occupying the oceans in remote times.

For simple beauty of a unique kind it would be difficult to surpass the varied designs of their shells, some of which are pictured in the first of my drawings. Hundreds of different patterns are to be found in any wealthy naturalist's collection, and there is no reason to suppose that all existing variations have yet been discovered.

In a living state the inmates of most of these shells possess the curious capability of protruding long streamers or filaments of their strange bodies either through the main orifice of their shells or through the latticed exterior, and these tentacles serve as prey-catchers, and also as legs enabling them to roam about in an awkward manner. Bear in mind that these streamers are not permanent features—they are temporary extensions of the jelly body, made at the will of the animal, and may be one and all retracted entirely into the main mass.

The reproduction of many species of these curious beings is effected in a really extraordinary manner, a layer of jelly overspreading the shell and subsequently breaking up into myriads of invisible living things which swim about for a time, but ultimately settle down, each to form a pretty case resembling that of its parent. Other species adopt different methods.

I could give you the scientific names of those shown in No. 1, but what purpose would they serve? Let us try to fathom the mystery why such minute, rudimentary creatures have the power of extracting the lime, etc., from the water, and depositing it upon themselves so picturesquely.

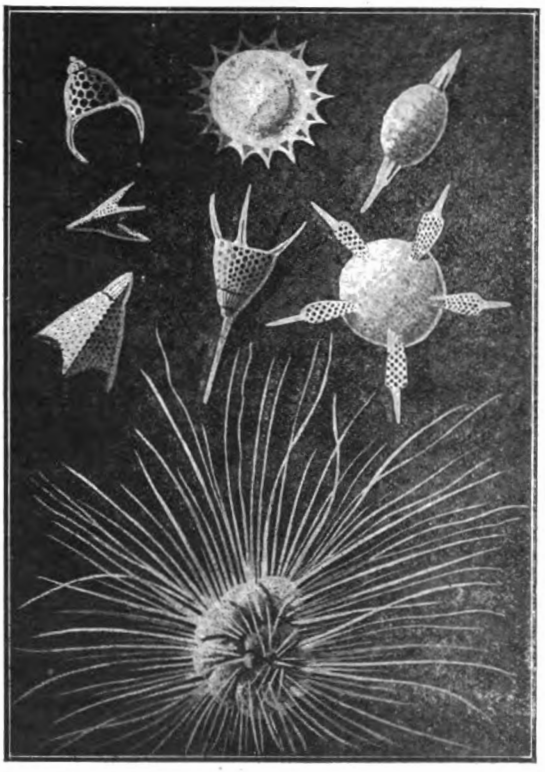
Each separate member shown in No. 1 is a mere speck, yet magnify any of them, and then—well, everyone who *does* see them under such conditions marvels at the sight. Of course, in chalk they are crushed flat, as a rule; but sections of chalk, very thin, or of limestone—which is solidified chalk—reveal their outlines and interior structure very plainly.

Passing on to No. 2 illustration of natural-sized shells, I doubt whether any reader would care to be incommoded with great wealth if he had had to take it in loads of small shells. Yet the cowrie, a brightly polished shell of the kind depicted in the upper left-hand corner of No. 2 was once the sole currency employed by the natives of the West Indies and elsewhere, no doubt proving a discouragement to the acquisition of riches by the naked fellows without pockets.

A few explanatory words may be said concerning the process responsible for the highly pleasing gloss of their surfaces. The mantle of the animal (the equivalent to the fringe just inside an oyster or a scallop) habitually embraces the shell in a complete manner, and the result of the incessant action of that useful organ is to so level all particles as to permanently polish the surface.

Staircase shells are remarkable, in addition to their peculiar shape, for the extreme beauty and delicacy of their markings and colouring. Those in my possession are individually only about the diameter of half-an-inch, yet when seen through a hand lens reveal most conspicuously their elegance. One is shown at the top of No. 2. It will be noticed that the

(*Continued on page* 178.)



A few magnified shells from among the many hundreds of different kinds of which chalk is composed. Each is occupied by a jellified animal which can protrude temporary tentacles through the chalk, as shown in the lower half of the drawing.

The Microscope.

THERE are few objects that are more deservedly popular with the microscopist than the extremity of the proboscis of the blow-fly.

The photograph shown was taken under a microscope with a magnification of 50 diameters, and, perfect though the picture is, it falls a long way short of presenting the minute delicacy of structure that a peep at the original provides.

Look at the picture through an ordinary pocket lens. You will see the curious form of the *pseudo-tracheæ*, those rib-like channels that extend from extremities to centre; the title of these originated in the idea—since exploded—that their functions had connection

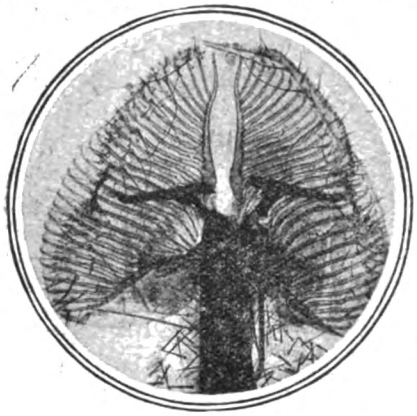


Photo.] [*A. H. Williams.*

Extremity of the proboscis of a blow-fly.

with the respiration of the creature. Subsequent investigation has proved that they have to do with its feeding, that they are suctorial in their character instead of respiratory; they are really a series of minute arches, the extremities of which can be closed at will. Your lens will show the terminations of the upper of these into the two large trunks, whilst those of the lower end in the teeth, those forked processes near the dark muscle in the centre.

The larger hairs can be seen by the unaided eye, but the lens will show the myriads of exceedingly minute hairs, with which the principal part of the membrane composing the structure is studded.

The dark bands that extend across the organ are muscles for the closing of the sides together.

Answers to Correspondents.

SPECIAL ANNOUNCEMENT.

Owing to the pressure upon our space, it is only possible to print in these columns answers to questions of general interest. But so that other correspondents may not be disappointed in receiving answers to their queries, we are prepared, as far as possible, to send such answers as are not of sufficient interest to publish, direct by post, provided that with each separate question three Coupons (like that on the back page) cut from the current issue of "The Country-Side" are enclosed, and the correspondent promises to distribute the three copies of the paper among persons who do not already take it.

N.B.—Readers who desire to have specimens named would be well advised to join the B.E.N.A., and thus obtain the advantage of the services of the numerous experts who are willing to name specimens for members. A list of experts is published with the B.E.N.A. list of members.

Hedge-Sparrow's Song.—No, it is not unusual to hear this so early as January 1st, in a favourable year; though the bird is often silent for several weeks in mid-winter.—(to A. W. B.)

Immigrant Woodpigeons.—Yes, immense flocks of woodpigeons come over to us from Scandinavia and north-eastern Europe for the winter. They spread over the country and do a terrible amount of injury to the farmer. —(to J. R. LANGMAID.)

Blackbirds' Winter Flight.—I think that the reason why blackbirds in late winter seem to dodge about among the bushes in the morning, flying more swiftly than at other seasons, is that they are pairing and chasing rivals away. —(to G. E. JOHNSON.)

"Marked Birds."—Yes, it is probable that the variously-coloured sparrows—one nearly white, one with buff wings, one mottled, and one with pale collar—are all members of the same family. For seven years now a similar family, varying from year to year, has bred about my house.—(to A. M. WHYTE.)

Differences in London Gulls.—The larger individuals among the flocks of London gulls are "herring gulls"; but the differences in the head-colouring of the smaller gulls do not indicate difference of kind. They are all "black-headed gulls," and many of them are showing distinct signs of the dark hoods which they will bear in summer.—(to W. E. LEVETT.)

Return of the Birds.—Undoubtedly instinct plays a strong part in the return of the birds to the very spot where they nested or were reared last year. But this only becomes effective when they have been carried by the wind within sight of remembered landmarks; though to their "bird's-eye view" from aloft a hundred miles between landmarks might be nothing.—(to K. B. BRACKENBURY.)

Dead Chaffinch.—It would be impossible to say what the bird died of without a *post-mortem*. The external appearance suggested a fit of some kind as the immediate cause. The lump over the eye was a tumour, which could easily have been removed by a medical man, or anyone possessing a little skill and anatomical knowledge. You give no idea how the bird was fed, and this knowledge would probably have given the key to a more definite cause of death.—(W. COLLOP, Hornsey.)

Jacobin's Eyes Affected.—I really do not know whether astigmatism has been recognised among birds, but I see no reason why it should not affect them just the same as humans. However, your bird's actions may perhaps be due to a simpler cause. Many jacobins, particularly those of good quality whose heads are smothered in the mass of feathers forming what is called the "hood and chain," have their vision more or less obscured. These birds naturally acquire a habit of groping their way about, and often go through strange antics in endeavouring to see over or beyond the obstructing feathers.—(to M. PIRKIS, Redcliffe Square, S.W.)

Nesting Boxes.—The sooner you put up nesting-boxes now the better.—(to G. W. GILLESPIE.)

Gait of Thrushes.—No, I do not think that song thrushes even run, but always hop.—(to J. R. HARDING.)

"Strange Captures."—It is not very unusual for a wren or robin to be caught in a wire rat-trap.—(to R. W. PETHEN.)

Eggs of Game.—Of course, it is illegal to take the eggs of game birds except on ground of which you own the shooting rights.—(to G. W. GILLESPIE.)

Black Sparrow.—Black sparrows are very rare; but I have no doubt that the "beautiful little bird with the black and glossy plumage of a blackbird" which fed regularly with the sparrows was one.—(to F. M. HEWETT.)

Water Snakes.—Snakes always swim with only their head above water. The one which your son saw near Poona was most probably one of the harmless, brown water snakes so common in India.—(to Rev. H. M. CHURCH, Edinburgh.)

Rearing Wild Rabbit.—There is not much difficulty in rearing a wild rabbit that is taken from the nest, and taming it. Wild rabbits caught at any age and given their liberty in a yard where they can dig, will live, but will never become tame.—(to W. HOWARTH.)

Keeping a Butterfly.—Yes, butterflies can be kept alive for a long time, and will become tame, if fed on moistened sugar, brown preferred. As your butterfly appears to like sitting on the damp moss in the corner of his box, this is probably an addition to its comfort. Butterflies are often aroused to activity in winter by unusual or accidental warmth reaching them in their sleeping places.—(to E. HODGETTS.)

How Peewits Live.—Of course it is not true that peewits live "by suction." What could they suck out of the ground except water? They live upon worms, etc., and are very clever at hearing them move near the surface and pulling them out. In hard frosts they go on short commons, being only able to obtain food when the mud flats or sand flats of the nearest tidal river or sea coast are uncovered at low tide.—(to H. YOUNG, Leytonstone.)

Abundance of Starlings.—There is probably a double reason for the appearance of large numbers of starlings in your garden this winter for the first time. Firstly, starlings have been multiplying steadily for many years, owing to good breeding seasons and mild winters; so that they are overcrowded and have to find new feeding-places. Secondly, there has been, this year, for the first time for some years, a spell of snowy weather which reduced the starlings to sore straits.—(to W. D. ARMSTRONG.)

Where "The Country-Side" Goes.—"All good wishes" writes Mr. R. Kearton, the famous nature-photographer, who, I regret to know, has suffered much lately from influenza, "to you and THE COUNTRY-SIDE, which I meet in a great number of unexpected corners of the earth."

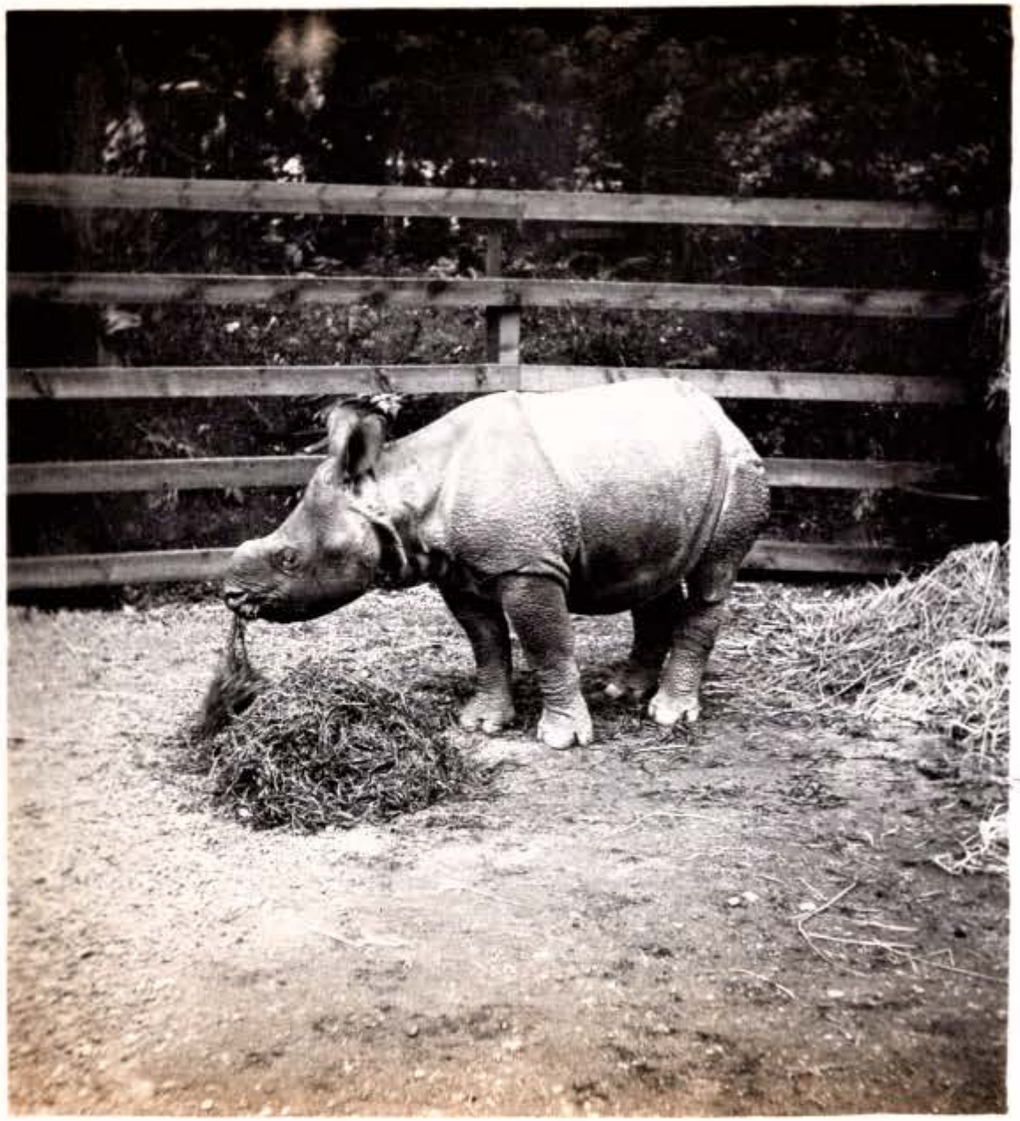
From a Friend.—"As for THE COUNTRY-SIDE I feel that mere words are quite inadequate to express my appreciation of its value. I now subscribe for two copies, one of which goes to our village schoolmaster and from him to his boys, and the other to a missionary nephew and his wife in India."—Mrs. JARVIS BARBER, Hutheresage.

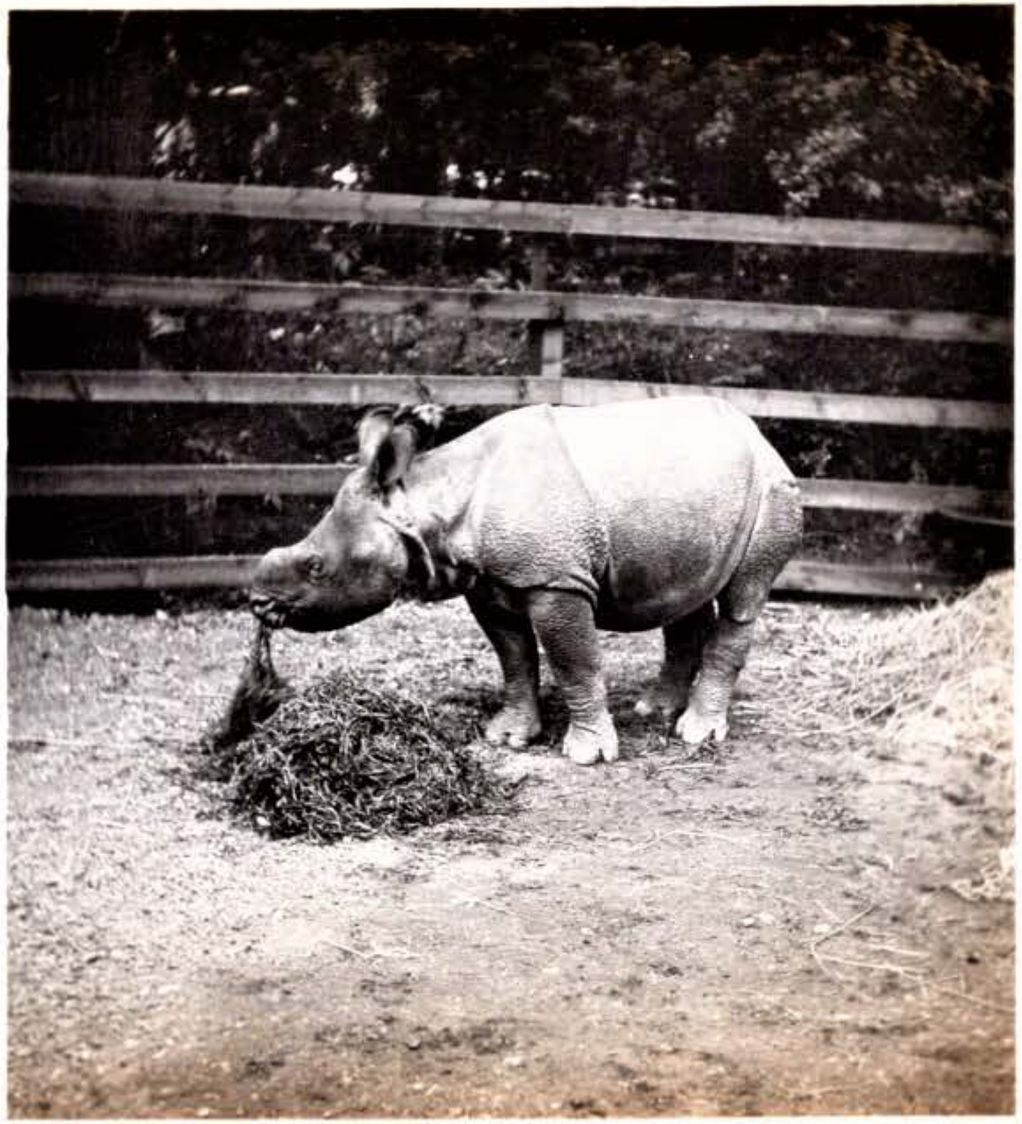
YOUNG INDIAN RHINOCEROS

(Rhinoceros Unicornis).

Although great mortality seems inevitable among many exotic creatures kept in captivity, an insurance company would probably not demand a very high premium on the life of this interesting little stranger, who is one of the most striking of the live stock presented to the Prince of Wales during his recent Indian tour. There is no reason why the grandchildren of people who are young to-day should not see this same rhinoceros at the Zoo. Nor probably would its appearance be very different then. Even at its tender age of one year it exhibits none of the smooth chubbiness of infancy. Already its hide has that loose appearance of being roughly put together, which made the author of "The Bad Child's Book of Beasts," exclaim: "Rhinoceros! your hide seems all undone!" This folding of the hide into the resemblance of armour-plates is characteristic of the Asiatic rhinoceroses, among which the great one-horned Indian rhinoceros has come to be known as *the* rhinoceros. At present at the Zoo, owing to the attractiveness of infancy and the glamour of Royal ownership, *the* rhinoceros means, of course, the subject of this picture.

E. KAY ROBINSON,
Editor of "The Country-Side."





THE COUNTRY-SIDE STEREOGRAPH.
ZOO SERIES NO. 23.

YOUNG INDIAN RHINOCEROS.