

orange, yellow, or white. There are also structural differences in the skulls, as in the amount of inflation of the pterygoid bones, which indicate real differences of species; but the materials in our museums are not yet sufficient to correlate these with external characters and geographical distribution. The habits of all are apparently alike. They are natives of Guiana, Brazil, and Peru, and one if not two species (*B. infuscatus* and *B. castaneiceps*) extend north of the Isthmus of Panama as far as Nicaragua. Of the former of these Dr Seeman says that, though generally silent, a specimen in captivity uttered a shrill sound like a monkey when forcibly pulled away from the tree to which it was holding.¹

Genus *Cholepus*.—Teeth $\frac{1}{2}$; the most anterior in both jaws separated by an interval from the others, very large, caniniform, wearing to a sharp, bevelled edge against the opposing tooth, the upper shutting in front of the lower when the mouth is closed, unlike the true canines of heterodont mammals. Vertebrae: C 6 or 7, D 23-24, L 3, S 7-8, C 4-6. One species (*C. didactylus*) has the ordinary number of vertebrae in the neck; but an otherwise closely allied form (*C. hoffmanni*) has but six. The tail is very rudimentary. The hand generally resembles that of *Bradypus*; but there are only two functional digits, with claws,—those answering to the second and third of the typical pentadactyle manus. The structure of the hind limb generally resembles that of *Bradypus*, the appellation "two-toed" referring only to the anterior limb, for in the foot the three middle toes are functionally developed and of nearly equal size. *C. didactylus*, which has been longest known, is commonly called by the native name of *Unau*. It inhabits the forests of Brazil. *C. hoffmanni* has a more northern geographical range, extending from Ecuador through Panama to Costa Rica. Its voice, which is seldom heard, is like the bleat of a sheep, and if the animal is seized it snorts violently. Both species are very variable in external coloration. (W. H. F.)

SLOUGH, an urban sanitary district of Buckinghamshire, England, is situated on the Great Western Railway, 18½ miles west of London and 2 north of Windsor. Within recent years it has largely increased, and it contains a number of good shops and villas. It is supplied with water from artesian wells. The parish church of St Mary, erected 1837, has been recently enlarged. Among other public buildings are the British orphan asylum, the Eton union workhouse, and the reading-room and literary institute. Sir William Herschel, the astronomer, resided at Slough, and there constructed his telescope. The population of the urban sanitary district, which embraces parts of the parishes of Stoke Poges and Upton-cum-Chalvey, in 1871 was 4509 and in 1881 (area, 401 acres) it was 5095.

SLOVAKS. See SLAVS.

SLOVENES. See SLAVS.

SLUG. See SNAIL.

SLUTSK, a district town of Russia, in the government of Minsk, situated on the Stutcha river (tributary of the Pripet), 123 miles south of Minsk. This old town is mentioned in the 12th century as a dependency of Kieff, and, like other towns of the region, was devastated by the Tatars, and later suffered in the wars between Russia and Poland. It is now merely a large village, whose inhabitants are chiefly engaged in agriculture, with a little trade in corn, timber, and wooden wares. The immense marshy and woody tracts of the Polesie (see MENSCK) surround it on all sides, the Stutcha being its chief means of communication. Its population remains almost stationary and was 19,000 in 1883.

SMALLPOX, or VARIOLA (*varus*, "a pimple"), an acute infectious disease characterized by fever and by the appearance on the surface of the body of an eruption, which, after passing through various stages, dries up, leaving more or less distinct cicatrices. Few diseases have been so destructive to human life as smallpox, and it has ever been regarded with horror alike from its fatality, its loathsome accompaniments and disfiguring effects, and from the fact that no age and condition of life are exempt from liability to its occurrence. Although in most civilized countries its ravages have been greatly limited by the protection afforded by vaccination, yet epidemic outbreaks are far

¹ Godman and Salvin's *Biologia Centrali-Americana*, p. 184.

from uncommon, affecting especially those who are unprotected, or whose protection has become weakened by lapse of time.

Much obscurity surrounds the early history of smallpox. It appears to have been imported into Europe from Asia, where it had been known and recognized from remote antiquity. The earliest accounts of its existence reach back to the middle and end of the 6th century, when it was described by Procopius and Gregory of Tours as occurring in epidemic form in Arabia, Egypt, and the south of Europe. In one of the narratives of the expedition of the Abyssinians against Mecca (c. 550) the usual miraculous details are combined with a notice of smallpox breaking out among the invaders.² Not a few authorities, however, regard these accounts as referring not to smallpox but to plague. The most reliable statements as to the early existence of the disease are found in Rhazes (see vol. xv. p. 805), by whom its symptoms were clearly described, its pathology explained by a humoral or fermentation theory, and directions given for its treatment. During the period of the crusades smallpox appears to have spread extensively through Europe, and hospitals for its treatment were erected in many countries. But at this period and for centuries afterwards the references to the subject include in all likelihood other diseases, since no precise distinction appears to have been made between the different forms of eruptive fever until a comparatively recent date. Smallpox was known in England as early as the 13th century, and had probably existed there before. It appears to have been introduced into America shortly after the discovery of that continent, and there, as in Europe and throughout the known world, destructive epidemics were of frequent occurrence during succeeding centuries.

The only known factor in the origin of smallpox is contagion,—this malady being probably the most contagious of all diseases. Its outbreak in epidemic form in a locality may frequently be traced to the introduction of a single case from a distance. The most direct means of communicating smallpox is inoculation (see below). By far the most common cause of conveyance of the disease, however, is contact with the persons or the immediate surroundings of those already affected. The atmosphere around a smallpox patient is charged with the products of the disease, which likewise cling tenaciously to clothing, furniture, &c. The disease is probably communicable from its earliest manifestations onwards to its close, but it is generally held that the most infectious period extends from the appearance of the eruption till the drying up of the pustules. Smallpox may also readily be communicated by the bodies of those who have died from its effects. No age is exempt from susceptibility to smallpox. Infants are occasionally born with the eruption or its marks upon their bodies, proving that they had undergone the disease *in utero*. Dark-skinned races are said to suffer more readily and severely than whites. One attack of smallpox as a rule confers immunity from any recurrence, but there are numerous exceptions to this rule. Overcrowding and all insanitary surroundings favour the spread of smallpox where it has broken out; but the most influential condition of all is the amount of protection afforded to a community by previous attacks and, especially in the present day, by vaccination. Such protection, although for a time most effectual, tends to become exhausted, unless renewed. Hence in a large population there is always likely to be an increasing number of individuals who have become susceptible to smallpox. This probably explains its occasional and even apparently

² See Nöldeke, *Geschichte der Perser*. . . aus Tabari (Leyden, 1879), p. 218. Nöldeke thinks that this notice may be taken from genuine historical tradition, and seems to find an allusion to it in an old poem.

periodic epidemic outbreaks in large centres, and the well-known fact that the most severe cases occur at the commencement,—those least protected being necessarily more liable to be first and most seriously attacked.

While the symptoms of smallpox are essentially the same in character in all cases, they are variously modified according to the form which the disease may assume, there being certain well-marked varieties of this as of most other infectious maladies. The following description applies to an average case. After the reception into the system of the smallpox contagion the onset of the symptoms is preceded by a period of incubation, during which the patient may or may not complain. This period is believed to be from about ten to fourteen days. In cases of direct inoculation of the virus it is considerably shorter. The invasion of the symptoms is sudden and severe, in the form of a rigor followed by fever (the *primary fever*), in which the temperature rises to 103° or 104° Fahr. or higher, notwithstanding that perspiration may be going on. A quick pulse is present, together with thirst and constipation, while intense headache accompanied with vomiting and pain in the back is among the most characteristic of the initial symptoms. Occasionally the disease is ushered in by convulsions. Some authorities hold that the more violent the invasion the more severe the attack is likely to prove. These symptoms continue with greater or less intensity throughout two entire days, and during their course there may occasionally be noticed on various parts of the body, especially on the lower part of the abdomen and inner sides of the thighs, a diffuse redness accompanied by slight spots of extravasation (*petechiæ*), the appearance somewhat resembling that of scarlet fever. These "prodromal rashes," as they are termed, appear to be more frequent in some epidemics than in others, and they do not seem to have any special significance. They are probably more frequently seen in cases of the mildest form of smallpox (varioid), referred to below. On the third day the characteristic eruption begins to make its appearance. It is almost always first seen on the face, particularly about the forehead and roots of the hair, in the form of a general redness; but upon this surface there may be felt by the finger numerous elevated points more or less thickly set together. The eruption, which is accompanied by heat and itching, spreads over the face, trunk, and extremities in the course of a few hours,—continuing, however, to come out more abundantly for one or two days. It is always most marked on the exposed parts; but in such a case as that now described the individual "pocks" are separated from each other (discrete). On the second or third day after its appearance the eruption undergoes a change,—the pocks becoming vesicles filled with a clear fluid. These vesicles attain to about the size of a pea, and in their centre there is a slight depression, giving the characteristic umbilicated appearance to the pock. The clear contents of these vesicles gradually become turbid, and by the eighth or ninth day they are changed into pustules containing yellow matter, while at the same time they increase still further in size and lose the central depression. Accompanying this change there are great surrounding inflammation and swelling of the skin, which, where the eruption is thickly set, produce much disfigurement and render the features unrecognizable, while the affected parts emit an offensive odour, particularly if, as often happens, the pustules break. The eruption is present not only on the skin but on mucous membranes, that of the mouth and throat being affected at an early period; and the swelling produced here is not only a source of great discomfort but even of danger from the obstruction thus occasioned in the upper portion of the air-passages. The voice is hoarse and a copious flow of saliva comes from

the mouth. The mucous membrane of the nostrils is similarly affected, while that of the eyes may also be involved, to the danger of permanent impairment of sight. The febrile symptoms which ushered in the disease undergo marked abatement on the appearance of the eruption on the third day, but on the eighth or ninth, when the vesicles become converted into pustules, there is a return of the fever (*secondary or suppurative fever*), often to a severe extent, and not unfrequently accompanied by prominent nervous phenomena, such as great restlessness, delirium, or coma. On the eleventh or twelfth day the pustules show signs of drying up (desiccation), and along with this the febrile symptoms decline. Great itching of the skin attends this stage. The scabs produced by the dried pustules gradually fall off and a reddish brown spot remains, which, according to the depth of skin involved in the disease, leaves a permanent white depressed scar,—this "pitting" so characteristic of smallpox being specially marked on the face. Convalescence in this form of the disease is as a rule uninterrupted.

There are certain varieties of smallpox depending upon the form it assumes or the intensity of the symptoms. *Confluent smallpox* (*variola confluens*), while essentially the same in its general characters as the form already described, differs from it in the much greater severity of all the symptoms—even from the onset, and particularly in regard to the eruption, which, instead of showing itself in isolated pocks, appears in large patches run together, giving a blistered aspect to the affected skin. This confluent condition is almost entirely confined to the face, and produces shocking disfigurement, while subsequently deep scars remain and the hair may be lost. The mucous membranes suffer in a similar degree of severity, and dangerous complications may arise from the presence of the disease in the mouth, throat, and eyes. Both the primary and secondary fevers are extremely severe. The mortality is very high, and it is generally estimated that at least 50 per cent. of such cases prove fatal, either from the violence of the disease or from one or other of the numerous complications which are specially apt to attend upon it. Convalescence is apt to be slow and interrupted. Another variety is that in which the eruption assumes the *hæmorrhagic* form owing to bleeding taking place into the pocks after their formation. This is apt to be accompanied with hæmorrhages from various mucous surfaces (particularly in the case of females), occasionally to a dangerous degree and with symptoms of great prostration. Many of such cases prove fatal. A still more serious form is that termed *malignant smallpox*, in which, as in the malignant forms of other infectious diseases (see MEASLES and SCARLET FEVER), the patient is from the onset overwhelmed with the poison and quickly succumbs,—the rash scarcely, if at all, appearing or showing the hæmorrhagic or purpuric character. Such cases are, however, comparatively rare. The term *varioid* or *modified smallpox* is applied to cases occurring in persons constitutionally but little susceptible to the disease, or in whom the protective influence of vaccination or a previous attack of smallpox still to some extent exists. Cases of this mild kind are of very common occurrence where vaccination has been systematically carried out. As compared with an average case of the unmodified disease as above described, this form is very marked, the differences extending to all the phenomena of the disease. (1) As regards its onset, the initial fever is much milder and the premonitory symptoms altogether less in severity. (2) As regards the eruption, the number of pocks is smaller, often only a few and mostly upon the body. They not unfrequently abort before reaching the stage of suppuration; but should they proceed to this stage the secondary fever is extremely slight or even

absent. There is little or no pitting. (3) As regards complications and injurious results, these are rarely seen and the risk to life is insignificant.

Various circumstances affect the mortality in ordinary smallpox and increase the dangers attendant upon it. The character of the epidemic has an important influence. In some outbreaks the type of the disease is much more severe than in others, and the mortality consequently greater. Smallpox is most fatal at the extremes of life, except in the case of vaccinated infants, in whom there is immunity from the disease. Again, any ordinary case with discrete eruption is serious, and a case of confluent or even semi-confluent character is much more grave, while the hæmorrhagic variety is frequently and the malignant always fatal. Numerous and often dangerous complications, although liable to arise in all cases, are more apt to occur in the severer forms, and in general at or after the supervention of the secondary fever. The most important are inflammatory affections of the respiratory organs, such as bronchitis, pleurisy, or pneumonia, diphtheritic conditions of the throat, and swelling of the mucous membrane of the larynx and trachea. Destructive ulceration affecting the eyes or ears are well-known and formidable dangers, while various affections of the skin, in the form of erysipelas, abscess, or carbuncles, are of not infrequent occurrence. Persons of enfeebled health, and those whose constitutions are impaired by intemperance, readily succumb to attacks of smallpox, even of comparatively mild character, as do also pregnant women, to whom this disease is peculiarly dangerous.

The most important of all the conditions tending to affect the mortality from smallpox, alike in the individual and the community, is the protection afforded by VACCINATION (*q.v.*). During the first decade of life, if vaccination has been fully and successfully accomplished in infancy, the risk of death from smallpox is *nil*; but, should the disease be caught—which is improbable—it will in all likelihood show itself in the mild form of varioloid. As regards revaccination, it has been found in all smallpox hospitals that the attendants and nurses escape the disease when revaccinated. In the experience of the late Dr Waller Lewis in the case of an average of 10,504 persons permanently employed in the General Post Office, London, all of whom had to be revaccinated on admission, it was proved that in the ten years 1870-79 not a single fatal case of smallpox occurred, and only ten mild cases were seen during a period embracing two epidemics.

Treatment.—The treatment of smallpox is conducted upon the same general principles as that for the other infectious diseases (see CHOLERA, DIPHTHERIA, MEASLES, SCARLET FEVER). The establishment of smallpox hospitals separated as far as possible from populous localities, and the prompt removal of cases of the disease where practicable, as well as the diligent prosecution of vaccination and revaccination, are among the first requirements. The plan introduced into several large towns of compulsory notification of infectious diseases has much to recommend it. The special treatment applicable to a person suffering from smallpox includes in the first place the providing competent nurses, who, together with all others in the neighbourhood of the patient, should be duly protected by recent vaccination. The patient should lie on a soft bed in a well-ventilated but somewhat darkened room and be fed with the lighter forms of nutriment, such as milk, soups, &c. The skin should be sponged occasionally with tepid water, and the mouth and throat washed with a solution of chlorate of potash, Condy's fluid, or other safe disinfectant. In a severe case, with evidence of much prostration, stimulants may be advantageously employed. The patient should be always carefully watched, and special vigilance is called

for where delirium exists. This symptom may sometimes be lessened by sedatives, such as opium, the bromides, or chloral. With the view of preventing pitting many applications have been proposed, but probably the best are cold or tepid compresses of light weight kept constantly applied over the face and eyes. The water out of which these are wrung may be a weak solution of carbolic or boracic acid. When the pustules have dried up the itching this produces may be much relieved by the application of oil, or vaseline. Complications are to be dealt with as they arise and the severer forms of the disease treated in reference to the special symptoms presented. In cases where the eruption is tardy of appearing and the attack threatens to assume the malignant form, the writer has seen marked benefit attend the use of the wet pack. Disinfectants should be abundantly employed in the room and its vicinity, and all clothing, &c., in contact with the patient should be burnt.

Inoculation.—Previous to the introduction of vaccination the method of preventive treatment by what was known as inoculation had been employed. This consisted in introducing into the system—in a similar way to the method now commonly employed in vaccination—the smallpox virus from a mild case with the view of reproducing the disease also in a mild form in the person inoculated, and thus affording him protection from further attack. This plan had apparently been resorted to by Eastern nations from an early period in the history of the disease. It was known to be extensively practised in Turkey in the beginning of the 18th century, when, chiefly through the letters of Lady Mary Wortley Montagu, it became known and was speedily adopted in England. There is no doubt, both from the statistics of the Smallpox and Inoculation Hospital, London, and from the testimony of physicians throughout the country, that this practice made a marked impression upon the fatality of the disease, and was itself attended with extremely little risk to life. The objections to it, however, were great, for, although usually conveying the smallpox in a mild form, it not unfrequently took effect severely, and, while death might be averted, the disfiguring results of the disease remained. Further, each inoculated person upon whom the operation took effect became for the time being a possible source of infection to others, and in point of fact the practice tended to spread the disease and so to increase the general mortality. Although inoculation continued to be practised for a number of years subsequently to Jenner's great discovery, it gradually became displaced by that vastly superior and safer preventive. In 1840 an Act of Parliament was passed rendering smallpox inoculation unlawful in England. (J. O. A.)

SMART, CHRISTOPHER (1722-1771), English poet, was born at Shipbourne in Kent on 11th April 1722. The discovery that Smart was anything more than an unfortunate Bohemian of letters who wrote much uninteresting verse of second-rate 18th-century quality is quite recent. After one or another of his superseded translations or ineffective exercises in heroics had in turn been assigned the place of honour as his representative literary work, his real masterpiece was discerned in a poem which, except for a reprint issued in 1819, had been singularly overlooked, and even omitted from the collected editions of his poetry. The history of this poem, *A Song to David*, is somewhat remarkable. It was written in the saner moments of confinement for a fit of insanity, and was, it is said, on not unimpeachable authority perhaps, indented with an iron nail or a key on the wall of the cell in default of other means of writing. The real facts of the case would seem to be that the unfortunate poet inscribed one or two stanzas in the manner asserted, and that he either dictated or was given the materials wherewith to write the rest of the poem.

There is no internal evidence of any morbid origin, however, for the poem is full of a healthy and virile energy. As a boy he was delicate and precocious, with a facile gift of verse, which already won him a certain notoriety, of not the best effect haply, at Durham school, whither he had been sent on leaving a preparatory school at Maidstone. During a holiday visit to Raby castle his boyish gifts attracted the interest of the duchess of Cleveland, who made him an allowance of £40 a year, which was continued until her death, and which possibly served further to weaken his self-reliance. At Cambridge, where he was entered at Pembroke Hall in 1739, he led a rather dissipated life, getting heavily into debt, and, while he easily excelled in certain congenial branches of study, he paid little attention to the usual college routine. In spite of his irregularities, he was made a fellow of his college in 1745, and at a later date won the newly instituted Seaton prize for an English poem,—the subject each year being one of "the attributes of the Supreme Being." Smart gained this prize five times in all. Resorting then to London and marrying there a daughter-in-law of Newbery, the publisher, the poet attempted to make a living by literary hack-work and journalism, but sank gradually into difficulties through his improvident and dissipated habits, so that his wife and children were at last obliged to leave him. His misfortunes seem to have culminated in the fit of insanity associated with *A Song to David*, which was published in 1763, and in 1771 Smart died from the effects of poverty and disease.

Amid all his miseries Smart must have been fairly industrious if his journalistic work was at all proportionate to his more substantial literary productions. Of all that he wrote, however, *A Song to David* will alone bear the test of time. Unlike in its simple forceful treatment and impressive directness of expression, as has been said, to anything else in 18th-century poetry, the poem on analysis is found to depend for its unique effect also upon a certain ingenuity of construction, and the novel way in which David's ideal qualities are enlarged upon. This will be more readily understood on reference to the following verse, the first twelve words of which become in turn the key-notes, so to speak, of the twelve succeeding verses:—

"Great, valiant, pious, good, and clean,
Sublime, contemplative, serene,
Strong, constant, pleasant, wise!
Bright effluence of exceeding grace;
Best man!—the swiftness, and the race,
The peril, and the prize."

The last line is characteristic of another peculiarity in *A Song to David*, the effective use of alliteration to complete the initial energy of the stanza in many instances. But in the poem throughout is revealed a poetic quality which eludes critical analysis and gives its writer an exceptional interest hardly maintained by his other works.

A Song to David is found in somewhat shortened form in Ward's *English Poets*, vol. iii., and Smart's other poems are given in Anderson's *British Poets* (1794), vol. xi., which contains also a full account of his life.

SMEATON, JOHN (1724-1792), English civil engineer, the son of an attorney, was born at Austhorpe Lodge, near Leeds, on 8th June 1724. He received a good education at the grammar-school of Leeds, displaying special proficiency in geometry and arithmetic. At a very early age he evinced a great liking for the use of mechanical tools, and in his fourteenth or fifteenth year contrived to make a turning-lathe. On leaving school in his sixteenth year he was employed in his father's office, but, after attending for some months in 1742 the courts at Westminster Hall, he earnestly requested to be allowed to follow some mechanical profession. He became apprentice to a philosophical instrument maker, and in 1750 set up in business on his own account. Besides improving various mathematical instruments used in navigation and astronomy, he carried on several experiments in regard to other mechanical appliances, amongst the most important being a series on which he founded a paper—for which he received the Copley medal of the Royal Society in 1759—entitled *An Experimental Inquiry concerning the Native Powers of*

Water and Wind to turn Mills and other Machines depending on a Circular Motion. In 1754 he made a tour of the Low Countries to study the great canal works of foreign engineers. Already by his papers read before the Royal Society and his intercourse with scientific men his abilities as an engineer had become well known, and in 1756 application was made to him to reconstruct the Eddystone lighthouse, which had been burnt down in December of the previous year (see LIGHTHOUSE, vol. xiv. p. 616). Smeaton now began to be much consulted in regard to all kinds of important engineering projects, including river navigation, the drainage of fens, the designing of harbours, and the repair and construction of bridges, owing to the thorough engineering skill he displayed in every operation he undertook. In judging of his achievements it ought to be remembered that he was the precursor of the great modern engineers. James Watt said of him, "His example and precepts have made us all engineers." He combined in a remarkable degree theoretical with practical skill, much of his success being due to the fact that, as Stevenson states, "he was an incessant experimenter." A considerable portion of his time was also devoted to astronomical studies and observations, on which he read various papers before the Royal Society. In order to prepare an account of the various works on which he had been engaged as an engineer, Smeaton resolved to retire from his profession, but he only lived to complete in 1791 his *Narrative of the Building of Eddystone Lighthouse*. He died at Austhorpe, 28th October 1792, and was buried in the old parish church of Whitkirk.

See *A Short Narrative of the Genius, Life, and Works of the late Mr John Smeaton*, 1793; and Smiles, *Lives of the Engineers*.

SMELL is a sensation excited by the contact with the olfactory region of certain substances, usually in a gaseous condition and necessarily in a state of fine subdivision. The sense is widely distributed throughout the animal kingdom. The lower animals, especially those breathing in water, become cognizant of the presence of odoriferous matter near them without touch, vision, or hearing, and we suppose that they do so by some sense of taste or smell, or a combination of both. In such cases smell has been appropriately termed "taste at a distance," by which is meant that particles of matter may be diffused through the water so as to come into contact with the terminal organ and give rise to a sensation such as would have been excited had the matter from which the particles emanated come directly into contact with the nerve-endings. It is therefore of no great importance whether such sensations in humble aquatic organisms are termed taste or smell. In the higher air-breathing animals, however, the senses are differentiated: that of taste is found at the entrance of the alimentary canal, whilst that of smell guards the opening of the respiratory tract. This view assists in the interpretation of various structures met with in the lower forms which have been fairly regarded by naturalists as olfactory organs.

Comparative View of Olfactory Organs.—In various *Medusæ* pit-like depressions, lined with ciliated epithelium, on the dorsal side of the excavation in which the "marginal" bodies are found, have been called olfactory regions. In many *Arthropoda* the sense of smell is located in delicate tubular structures, or conical projections, found on the antennæ and connected with nerves. Similar organs are met with in *Crustacea*. In *Cyclops* (*Copepoda*), *Isopoda*, and *Thoracostraca* olfactory hairs are present as delicate appendages of the anterior antennæ, chiefly in the male sex. In *Schizopoda* the anterior antennæ have a comb-like prominence bearing a great number of olfactory hairs. *Insecta* have olfactory organs largely developed, usually in the form of hairs, cones, or knobs on the antennæ, and connected with gangliated nerve-endings. Olfactory organs are also met with in *Mollusca*: in *Lamelli-branchiata* they appear as hairs on the margin of the mantle; in aquatic *Gasteropoda* as tufts of hairs scattered over the surface of the body and specially aggregated in those parts where