phenomena described, granting the possibility of one having survived to the present time. Newman@@1 and Gosse@@2 have both supported this theory, the former citing as evidence in its favour the report of a creature with the body of an alligator, a long neck and four paddles having been seen by Captain Hope of H.M.S. “ Fly ” in the Gulf of California.@@3 (9) No satisfactory explanation has yet been given of certain descriptions of the sea-serpent. Perhaps the most remarkable of these is Lieutenant Hayne’s@@4 account of a creature seen from H.M. yacht “Osborne.” Two different aspects were recorded—the first being a ridge, 30 ft. in length, of triangular fins, each rising 5 to 6 ft. above the water, while the second view showed a large round head 6 ft. in diameter, with huge flappers, which moved like those of a turtle.

A more recent record of the appearance of a mysterious sea- monster is that of Messrs Meade-Waldo and Nicoll, both fellows of the Zoological Society, in the *Proceedings* of that Society for 1906, p. 719. These two gentlemen on the 7th of December 1905 were on board the yacht “ Valhalla ” off the coast of Brazil when at 10·15 a.m. they saw, 100 yds. from the ship, a large fin projecting above the water to a height of 18 in. or 2 ft., and 6 ft. in length. Under the water to the rear of the fin was the shade of a considerable body. When Mr Meade-Waldo directed his field-glasses upon the object he saw a great head and neck rise out of the water in front of the fin. The neck appeared about the thickness of a man’s body, and 7 to 8 ft. in length. The head was of the same thickness and had a very turtle-like appearance, eye and mouth being distinctly seen. The object was going very slowly and shortly disappeared from view. In this case as in others the objects seen were not sufficient to identify the nature of the animal. It is difficult to attribute such a head and neck to any known fish, and turtles have no dorsal fin. It would thus appear that, while, with very few exceptions, all the so-called “ sea-serpents ” can be explained by reference to some well-known animal or other natural object, there is still a residuum sufficient to prevent modern zoologists from denying the possibility that some such creature may after all exist.

Distinct in origin from the stories already touched on is the legend of the sea-serpent or *tinnīn* among the Arabs (Mas'ūdī i. 266 seq.; Kazwīnī i. 132 seq.; Damiri i. 186 seq.), which is described in such a way as to leave no doubt that the waterspout is the pheno­menon on which the fable rests. The *tinnîn* is trie Hebrew *tannīn* (E.V. "whale,” “ dragon ”), which in Ps. cxlviii. 7 might in the context be appropriately rendered “ waterspout.”

In addition to the sources already cited, the reader may consult *Blackwood's Magazine,* vol. iii. (1818); Lee, *Sea Monsters unmasked* (International Fisheries Exhibition *Handbook,* London, 1883); Cogswell, *Zoologist,* pp. 1841, 1911 (1847); and Hoyle, *Proc. Roy. Phys. Soc. Edin.* vol. ix. (W. E. Ho.; J. T. C.)

SEA-SICKNESS, the symptoms experienced by many persons when subjected to the pitching and rolling motion of a vessel at sea, of which depression, giddiness, nausea and vomiting are the most prominent. They generally show themselves soon after the vessel has begun to roll by the onset of giddiness and discomfort in the head, together with a sense of nausea and sinking at the stomach, which soon develops into intense sickness and vomiting. At first the contents of the stomach only are ejected; but thereafter bilious matter, and occasionally even blood, are brought up by the violence of the retching. The vomiting is liable to exacerbations according to the amount of oscillation of the ship; but seasons of rest, sometimes admitting of sleep, occasionally intervene. With the sickness there is great physical prostration, as shown in the pallor of the skin, cold sweats and feeble pulse, accompanied with mental depression and wretchedness. In almost all instances the attack has a favourable termination, except in the case of persons weakened by other diseases.

The conditions concerned in the production of the malady are apparently of complex character. In the first place, the rolling or heaving of the vessel disturbs that feeling of the relation of the body to surrounding objects upon which the sense of security rests. The nervous system being thus subjected to a succession of shocks fails

to effect the necessary adjustments for equilibrium. Giddiness and with it nausea and vomiting follow, aided probably by the profound vaso-motor disturbance which produces such manifest depression of the circulation. The displacement of the abdominal viscera, especially the stomach, by the rolling of the vessel may possibly operate to some extent, but it can only be as an accessory cause. The same may be said of the influence of the changing impressions made upon the vision, since attacks of sea-sickness occur also in the dark, and in the case of blind persons. Other contributory causes may be mentioned, such as the feeling that sickness is certain to come, which may bring on the attack in some persons even before the vessel has begun to move; the sense of the body being in a yielding medium, the varied odours met with on board ship, and circumstances of a like nature tend also to precipitate or aggravate an attack.

No means has yet been discovered which can altogether prevent the occurrence of sea-sickness, nor is it likely any will be found, until the pitching movements of the vessel are done away with. Swinging couches or chambers have not proved of any practical utility. No doubt there is less risk of sickness in a large and well- ballasted vessel than in a small one; but, even though the rolling may be considerably modified, the ascending and descending move- ments which so readily produce nausea continue. None of the medicinal agents proposed possess infallible properties: a remedy which suits one person will often wholly fail with another. Nerve sedatives are among the most potent drugs which can be employed; and doses of bromide of potassium, bromural or chloral, appear to act usefully in the case of many persons. On the other hand, some high authorities have recommended the employment of nerve stimulants, such as a small cupful of very strong coffee, to be taken about two hours before sailing, which will frequently prevent or mitigate the sickness. When the vessel is in motion, or even before starting, the recumbent position with the head low and the eyes closed should be assumed by those at all likely to suffer, and, should the weather admit, on deck rather than below—the body, especially the extremities, being well covered. Many persons, however, find comfort and relief from lying down in their berths with a hot bottle to the feet, by which means sleep may be obtained, and with it a temporary abatement of the giddiness and nausea. Should sickness supervene small quantities of some light food, such as thin arrowroot, gruel or soup, ought to be swallowed if possible, to lessen the sense of exhaustion. The vomiting may be mitigated by saline effervescing drinks, ice, chloroform, hydrocyanic acid or opium. Alcohol although occasionally useful in great prostration, generally tends rather to aggravate the sickness. Dr Chapman, in accordance with his view that the cause of the sickness is an undue afflux of blood to the spinal cord, introduced a spinal ice-bag; but, like every other plan of treatment, it has only occasional success. Such remedies as nitrite of amyl and cocaine do not seem to yield any better results.

SEASON (O. Fr. *seson, seison,* mod. *saison,* Lat. *satio,* sowing time, the spring, from *serere,* to sow; in Late Lat. the word is found with its present meaning, the spring being considered as particularly *the* season of the year), a period of time, in particular, that of the four periods into which the year is divided by the changing of the temperature, rainfall, and growth and decay of vegetation due to the annual motion of the sun in declination. Divided strictly according to this motion the year falls into four nearly equal seasons, “ spring ” *(i.e.* the springing time, when vegetation rises or shoots), “ summer, ” (O. Eng. *sumer, cf.* Dutch *zomer,* Ger. *Sommer,* probably connected with Skt. *sama,* year), “ autumn ’’ (Lat. *autumnus, auctumηus,* from *augere,* to increase, the period of ripening or fruiting) and “ winter ” (common Teutonic, possibly a nasalized form of root seen in “ wet ’’). (See further Climate, Meteorology.)

SEATON, SIR JOHN COLBORNE, 1st Baron (1778-1863), British field marshal, was born at Lyndhurst, Hants, on the 16th of February 1778 and entered the 20th (Lancashire Fusiliers) in 1794, winning thereafter every step in his regimental promotion without purchase. He first saw service in the Helder expedition of 1799, and as a captain he took part in Sir Ralph Abercromby’s expedition to Egypt in 1801. He distinguished himself at Maida, and soon afterwards was brought under the notice of Sir John Moore, who obtained a majority for him and made him his military secretary. In this capacity he served through the Corunna campaign, and Sir John Moore’s dying request that he should be given a lieutenant-colonelcy was at once complied with. In the summer of 1809 Lieut.-Colonel Colborne was again in the Peninsula, and before taking command of the 66th regiment, he witnessed the defeat of the Spaniards at Ocaña. With the 66th he was present at Busaco and shared in the defence of the

*@@@1 Zoologist,* p. 2395.

@@@2 *Op. cit.* p. 358.

*@@@3 Op. cit.,* p. 2356 (1849).

*@@@4 Graphic* (30th June 1877).