of the obsolete words employed by him. In pure philology Skeat’s principal achievement is his *Etymological English Dictionary* (4 parts, 1879-1882; rev. and enlarged, 1910), the most important of all his works, which must be considered in connexion with the numerous publications of the English Dialect Society, in all of which, even when not edited by himself, he had a hand as the founder of the society and afterwards its president.

His other works include : *Specimens of English from 1394 to 1597* (1871); *Specimens of Early English from 1298 to 1393* (1872), in conjunction with R. Morris; *Principles of English Etymology* (2 series, 1887 and 1891); *A Concise Dictionary of Middle English (*1888), in conjunction with A. L. Mayhew; *A Student's Pastime* (1896), a volume of essays; *The Chaucer Canon* (1900); *A Primer of Classical and English Philology* (1905), &c., &c.

**SKEFFINGTON, SIR WILLIAM** (c. 1465-1535), lord deputy of Ireland, belonged to a Leicestershire family and was sheriff of Leicestershire and Warwickshire under Henry VII. He was master of the ordnance and a member of parliament during the reign of Henry VIII., and in 1529 was appointed deputy in Ireland for Henry’s son, the duke of Richmond, the nominal lord lieutenant of that country. He crossed over in August 1829, but his power was so circumscribed by instructions from Henry that the head of the Fitzgeralds, Gerald, 9th earl of Kildare, and not Skeffington, was the real governor of Ireland. This state of affairs lasted for three years and then in 1532 the deputy was recalled. In 1534, Kildare being in prison in England and his son Thomas, afterwards the 10th earl, being in revolt, Skeffington was again appointed deputy. After some delay he landed at Dublin in October 1534 and marched at once to relieve Drogheda, but further progress in the work of crushing the rebellion was seriously delayed by his illness. However, in the spring of 1535 he was again in the field. He took Maynooth, the heavy artillery used by him on this occasion earning for him his surname of "the gunner he forced some of Kildare’s allies to make peace and he captured Dungarvan. He died on the 31st of December 1535.

**SKEGNESS,** a seaside resort in the S. Lindsey, or Horncastle parliamentary division of Lincolnshire, England; 131 m. N. by E. from London by the Great Northern railway. Pop. of urban district (1901) 2140. Since 1873, when railway connexion was given with Firsby on the Grimsby branch line, the place has undergone a complete transformation, and now possesses good hotels and a pier. There are broad, firm sands, on which account Skegness is much visited. On bank holidays and similar occasions thousands of excursionists come from the manufacturing towns within reach. It is said that a former Skegness, an important haven, was obliterated by the encroach­ments of the sea; Leland, writing in the middle of the 16th century, states that proofs of this were then extant.

**SKELETON.** In most animals, and indeed in plants, the shape could not be maintained\* without a thickening and harden­ing of certain parts to form a support for the whole. These hardened parts are called the skeleton (Gr. σκέλλω, I dry), because they dry up and remain after the rest of the body has disappeared. In animals the skeleton is usually, and in higher animals always, rendered more rigid and permanent by the deposit in it of lime salts, thus leading to the formation of bone. Sometimes, as in most of the lower or invertebrate animals, the skeleton is on the surface and thus acts as a protection as well as a framework. This is known as an *exoskeleton.* In the higher or vertebrate animals there is an internal or *endoskeleton* and the exoskelcton is either greatly modified or disappears.

The following descriptive account is divided into (1) axial, or skeleton of the trunk, (2) appendicular or skeleton of the limbs, (3) skull, (4) visceral skeleton, or those parts which originally form the gill supports of water breathing vertebrates, (5) the exoskeleton, which is considered under the heading Skin and Exoskeleton. These divisions, although they seem logical, cannot in practice be strictly adhered to, especially in the case of the visceral skeleton, because doing so would involve, among other things, separating the description of the upper jaw from that of the rest of the skull. For the microscopical structure of bone see Connective Tissues.

*Axial,*

The axial skeleton, from a strictly scientific point of view, should comprise a good deal of the skull as well as the spinal column, ribs and breast bone, but, as the skull *(q.v.)* is dealt with in a separate article, the three latter structures alone are dealt with here.

The Spine, Spinal or Vertebral Column, chine or backbone in man consists of a number of superimposed bones which are named vertebrae, because they can move or turn somewhat on each other. It lies in the middle of the back of the neck and trunk; has the cranium at its summit; the ribs at its sides, which in their turn support the upper limbs; whilst the pelvis, with the lower limbs, is jointed to its lower end. The spine consists in an adult of twenty-six bones, in a young child of thirty-three, certain of the bones in the spine of the child becoming ankylosed or blended with each other in the adult. These blended bones lose their mobility and are called *false* vertebrae; whilst those which retain their mobility are the *true* verte­brae. The bones of the spine are arranged in groups, which are named from their position—vertebrae of the neck or cervical; of the chest, thoracic, formerly called dorsal; of the loins, lumbar; of the pelvis, sacral; and of the tail, coccygeal or caudal; and the number of vertebrae in each group may be expressed in a formula. In man the formula is as follows:—C7Th12L5S5Coc4 = 33 bones, as seen in the child ; but the five sacral vertebrae fuse together into a single bone—the sacrum—and the four coccygeal into the single coccyx. Hence the sacrum and coccyx of the adult are the false, whilst the lumbar, dorsal and cervical are the true vertebrae.

The vertebrae are irregularly-shaped bones, but as a rule have certain characters in common. Each possesses a body and an arch, which enclose a ring, with certain processes and notches. The body, or centrum, is a short cylinder, which by its upper and lower surfaces is connected by means of fibro- cartilage with the bodies of the verte­brae immediately above and below. The collective series of vertebral bodies forms the great column of the spine. The arch, also called neural arch, because it encloses the spinal marrow or nervous axis, springs from the back of the cen­trum, and consists of two symmetrical halves united behind in the middle line. Each half has an anterior part or pedicle, and a posterior part or lamina. The rings collectively form the spinal canal. The processes usually spring from the arch. The spinous process projects backward from the junction of the two laminae, and the collective series of these processes gives to the entire column the spiny character from which has arisen the term spine, applied to it. The transverse processes project out- ward, one from each side of the arch.

The articular processes project, two upward and two downward, and are for connecting adjacent vertebrae together. The notches, situated on the upper and lower borders of the pedicles, form in the articulated spine the intervertebral foramina through which the nerves pass out of the spinal canal.

The vertebrae in each group have characters which specially dis­tinguish them. In man and all mammals, with few exceptions, whatever be the length of the neck, the cervical vertebrae are seven in number. In man the body of a cervical vertebra is comparatively small, and its upper surface is transversely concave; the arch has long and obliquely sloping laminae; the ring is large and triangular; the spine is short, bifid, and horizontal ; the transverse process consists of two bars of bone, the anterior springing from the side of the body, the posterior from the arch, and uniting externally to enclose a foramen (vertebrarterial) through which, as a rule, the vertebral artery passes; the articular processes are flat and oblique, and the upper pair of notches are deeper than the lower. The first, second and seventh cervical vertebrae have characters which specially distinguish them. The first, or *atlas,* has no body or spine: its ring is very large, and on each side of the ring is a thick mass of bone, the *lateral mass,* by