genera are aquatic, e.g. *Ambulia* (old world tropics), and have much divided submerged leaves and entire aerial leaves. The leaf-arrangement varies; the leaves are alternate as in *Verbascum,* or the lower leaves are opposite and the upper alternate as in *Antirrhinum* (snap- dragon), or all are opposite (*Mimulus),* or whorled (some Veronicas). All varieties of leaf-arrangement are found in the one genus *Veronica q.v.*), in some New Zealand species of which the leaves are small and appressed to the stem The flowers are solitary in the leaf-axils, as in *Mimulus,* species of *Linaria,* &c., or form spikes or racemes which are terminal as in foxglove, species of *Veronica,* &c., or axillary as in *Veronica (Chamaedrys* section). Cymose inflorescences also occur, as in *Verbascum,* consisting of dichasia arranged in spikes, racemes or panicles. The flowers are hermaphrodite, hypogynous and zygomorphic in the median plane, being often more or less two-lipped, and having five sepals joined below and persisting in the fruiting stage, five petals uniting to form a corolla of very various shape, generally four stamens, the fifth (posterior) being suppressed or represented by a rudiment, while the anterior pair are longer than the posterior, and two generally equal carpels in the median plane forming a two-celled ovary containing numerous anatropous ovules on a thick axile placenta, and bearing a simple or bilobed style (fig. 2).

When a terminal flower is present it becomes regular as in toad- flax, where radial symmetry is produced by development of a spur to each petal—such flowers are termed peloric; all the flowers in a spike are sometimes peloric. In *Euphrasia* and many species of *Veronica* the posterior sepal is suppressed, and in *Calceolaria* the anterior petals are completely united. The form of the corolla shows great variety, depending on the length and breadth of the tube— which in *Veronica* is almost obsolete, while in foxglove it is large and almost bell-shaped —and the development of the limbs, which are spreading in *Veronica,* small and almost erect in figwort, or form a pair of closed lips as in *Linaria* and *Antirrhinum.* In *Linaria* the anterior petal is spurred ; in *Calceolaria* a very short tube is succeeded by a two-lipped limb, a smaller upper lip representing the two posterior petals and a larger, often very large, lower lip representing the three anterior petals. In *Verbascum* the five segments are almost equal, forming a nearly regular corolla; in *Veronica* the two posterior petals have united and the corolla is four-lobed. The approach to regularity in the corolla in *Verbascum* is associated with the presence *of* five fertile stamens, but the three posterior are generally larger than the two anterior. In *Veronica, Calceolaria* and other genera only two stamens are present. The anthers generally open introrsely by a longitudinal slit; their form shows great vaπety. These differences in the form of the corolla, the position and length of the stamens and the form of the anthers, are associated with their pollination by insects which probe the flower for honey, which is secreted by a disk surrounding the base of the ovary or by special nectaries below it. *Verbascum* and *Veronica* with a short-tubed corolla represent an open type of flower with more exposed nectar; in foxglove the honey is at the base of the long tube, and a bee crawling to reach it will rub with itβ back the anthers or stigmas which are placed on the upper side of the bell. The closed flowers of *Linaria* and *Antirrhinum* can be visited only by insects which are strong enough to separate the lips. In *Euphrasia* and others the pollen is loose and powdery, and the anthers have appendages which when touched by the head of the insect-visitor cause the pollen to be scattered.

The fruit is generally a capsule surrounded at the base, or sometimes as in yellow-rattle (*Rhinanthus)* enveloped in the persistent calyx; it opens by two or four valves, or, as in *Antirrhinum,* by pores. Occasionally it is a berry. The seeds are gcnerally small and numerous, rarely few and large as in *Veronica.* In *Linaria Cymbalaria* the fruit becomes buried by the stalks bending downwards when ripe.

The order is divided into tribes by characters derived from the number of fertile stamens present and the form of the corolla. It is well represented in Britain by 13 genera, viz. *Verbascum* (mullein), *Linaria* (toad-flax), *Antirrhinum* (snapdragon), *Scrophularia* (fig- wort), *Limosella*—a small creeping annual found on edges of ponds, *Sibthοrpia,* a small herb with creeping thread-like stems, *Digitalis* (foxglove), *Veronica* (speedwell), *Bartsia, Euphrasia* (cyebright), *Rhinanthus* (yellow-rattle), *Pedicularis* (louse-wort) and *Melampyrum* (cow-wheat). An American species of *Mimulus (M. Langs- dorfii)* has become naturalized by river-sides in many places. Several genera are well known in gardens; such are *Calceolaria,* an important genus in temperate South America, *Collinsia, Pentstemon* and *Mimulus* (musk), also American genera.

Scrophulariaceae are closely allied to Solanaceae (*q.v.*), from which they are distinguished by the median position of the carpels, and generally by the zygomorphic flower; *Verbascum* and its allies, in which the flower approaches regularity, form a connecting link. An anatomical distinction is found in the arrangement of the wood and bast in the stem, which is collateral, not bicollateral as in Solanaceae.

SCRUB-BIRD, the name of an Australian genus, one of the most curious ornithological types of the many furnished by that country. The first examples were procured between Perth and Augusta in West Australia, and were described by J. Gould in the Zoological Society’s *Proceedings* for 1844 (pp. 1, 2) as forming a new genus and species under the name of *Atrichia clamosa,* the great peculiarity observed by that naturalist being the absence of any bristles around the gape, in which respect alone it seemed to differ from the already known genus *Sphenura.* Later, however, it was given its modern name *Atrichornis clamosa,* and on account of the discovery of its peculiar sternum (made by A. Newton) it was removed from Oscine division of the Passeres, and the family *Atrichornithidae* in the sub-oscine division of Passeres was made for the genus, the nearest ally

being the lyre-bird (*q.v.*), now placed in the family Menuridae. Both the known species of scrub-bird are about the size of a small thrush—*A. clαmosa* being the larger of the two. This species is brown above, each feather barred with a darker shade; the throat and belly are reddish white, and there is a large black patch on the breast; while the flanks are brown and the lower tail-coverts rufous. *A. rufescens* of New South Wales has the white and black of the fore-parts replaced by brown, barred much as is the upper plumage. Both species inhabit the thickest “ scrub ” or brushwood forest; but little has been ascertained as to their mode of life except that the males are noisy, imitative of the notes of other birds, and given to violent gesticulations. The nest and eggs seem never to have been found, and indeed no example of the female of either species is known to have been procured, whence that sex may be inferred to escape observation by its inconspicuous appearance and retiring habits. (A.N.)

SCRUPLE, a term used in the two senses of (1) perplexity, doubt, reluctance or hesitation, especially the moral doubt arising from the difficulties of conscience; (2) a unit of weight, 1/24 part of the ounce in apothecaries’ weight, = ⅓ of a dram, 20 grains (1∙296 grammes). The word is an adaptation of Fr. *scrupule,* Lat. *scrupulus, scrupulum,* primarily a small sharp stone, also used in both the English meanings, dim. of *scrupus,* a rough stone, figuratively uneasiness of mind, probably to be connected with the root *skar,* to cut, cf. Gr. σκυρov, stone- chippings, *ξvρbv,* a razor.