In Nature's Garden

BY ELIZABETH MURRAY

The Evening Primrose

The evening primrose, genus *Oenothera*, is not, strictly speaking, a primrose. True primroses belong in the family Primulaceae which includes, in addition to primroses, such flowers as the true loosestrifes, shooting stars and pimpernels. But "evening" is an apt name for *Oenothera*, since one of the most notable characteristics of the genus is that the flowers open in the latter part of the day. One common name for *Oenothera biennis*, our best-known evening primrose, is four-o-clock, for that reason. Other common names are tree-primrose, coffee plant and king's cure-all.

Oenothera belongs to the Onagraceae or evening-primrose family, a group of mostly coarse herbs with flower parts in fours. The family also includes the water-primroses, Jussiaea, false loosestrife *Ludwigia*, the willow herbs, *Epilobium* and the curious little enchanter's nightshade, *Circaea*.

Gray's Manual of Botany describes the genus *Oenothera* as "a hopelessly confused and freely hybridizing group" — so for us lesser mortals, to recognise a flower as an evening primrose is quite satisfactory enough! *O. biennis* itself has at least half a dozen varieties. The typical form is a biennial (hence the specific name) with a sturdy stem that may be as much as three feet tall; thin lanceolate, alternate leaves; and showy terminal clusters of delicate yellow flowers about an inch across. The flower's evening opening is timely since it is mainly pollinated by moths flying then.

The generic name *Oenothera* is a very old one, going back to about 300 B.C. Theophrastus, a Greek philosopher, pupil of Plato and Aristotle and also a plant taxonomist, created about 500 botanical names. However, he gave the name *Oenothera* to the willow herbs, which are now called *Epilobium*, and it was only many centuries later that *Oenothera* came to rest on the evening primrose genus. The word comes from the greek word for wine, *oinos* and *thera*, meaning "imbibing." The roots of one species was supposed to be an incentive to wine drinking.

The roots of our own *Oenothera biennis* are edible, and perhaps might lead to some imbibing if not carefully prepared. They must be cooked in at least two lots of water, and also gathered out of the ground at exactly the right stage. Roots dug too early in the spring or too late in the fall have a peppery, biting quality. Correctly prepared, the roots taste like salsify or parsnip, but it is something of a tricky business!

Evening primrose is an important plant scientifically since the species *Oenothera lamarckiana* has been used extensively in cytogenetic research. The species has peculiar chromosome mechanics. During the meiotic divisions in which the gametes are formed, the chromosomes form into a ring instead of the paired formation of a conventional meiosis. The process is quite complicated and not totally understood, but the consequence is the production of what might be described as "pure breeding hybrids." The unusual mechanism probably increases the viability of the plant and makes it a good candidate for survival.

Illustration by Lucile Walton

Certainly our own species of evening primrose, *Oenothera biennis*, seems well-suited for survival also. It has a wide distribution throughout the eastern half of the United States, growing mostly in dry, open soil under a variety of different conditions and flowering in our area from June to October.