of fresh clover to a city car horse. That good-fellowship which was promoted by the botanical "clubs" of Mr. Canby's generation is now of historical interest, and the new regime has not yet supplied anything that can be compared with it. The death of Mr. Canby reminds us of how few of his former associates still remain with us.

NOTES ON EVENING PRIMROSES

By Kenneth K. Mackenzie

One of the most noticeable and common plants along the line of the Chesapeake & Ohio Railroad on both sides of the boundary line between Virginia and West Virginia is an evening primrose with unusually large yellow flowers. Growing on open sunny clay banks and along the rivers in loose, rocky soil, it forms one of the characteristic plants of the country, and almost entirely replaces the common *Oenothera biennis* L. It may be described as follows:

Oenothera argillicola sp. nov. Biennial, with numerous stems ascending from the same root, 5–15 dm. high. Stems puberulent, but otherwise without pubescence: leaves of the stemless plant of the first year rosulate, 6–15 cm. long, the blades oblanceolate, 15 mm. or less wide, sinuate, acute, puberulent on both sides, the mid-nerve strongly developed, tapering at the base to a long, rather narrowly winged petiole; cauline leaves of the flowering plants of the second year with narrowly linear-lanceolate blades, the well-developed ones 6–8 cm. long, 7 mm. or less wide, remotely sinuate-dentate, acute, glabrous or slightly puberulent, tapering to a petiole-like base and often strongly decurrent on the stem, forming well-developed ridges: calyx-tube 3–4 cm. long and longer than the sepals, perfectly glabrous, as also are the sepals, the tips of the latter free, spreading, often 3–4 mm. long: petals bright yellow, obcordate, crenulate, 3–4 cm. long, so that the open flower is often 6–8 cm. across: capsules perfectly glabrous, 2–3 cm. long, sessile, gradually tapering upward from the broad base and often strongly curved, somewhat quadrangular, strongly ribbed: seeds angled, 1–1.5 mm. long.

This plant with its ascending, non-hirsute stems, narrow leaves, large flowers, glabrous calyx and glabrous, long-tapering capsule is one of the most distinct species of this section of the genus, and is well worthy of cultivation.

Type collected by myself near White Sulphur Springs, West

Virginia, August 27, 1903, No. 373. There are no specimens referable to this species in the collections at the New York Botanical Gardens. Botanists believing in the validity of the genus *Onagra* would call this plant *Onagra argillicola.*

In view of the abundant literature which has appeared within the last few years on variations produced in *Oenothera biennis* under cultivation, the inquiry naturally suggests itself whether the species above described may not be such a variation only. Of course, it is now impossible to determine how or when it arose, but as it exists now it is as true a species as could be desired. Locally it is a plant of great abundance, and technically it has numerous distinguishing features, as shown above.

Field botanists naturally get well acquainted with variations in *Oenothera biennis*, and know within general lines what may be looked for, but in addition to the above plant (of whose specific rank, I feel sure) I have collected another form of *Oenothera*, which for the present must be referred to *O. biennis*, although often very distinct. This plant, which grows in sunny situations in low grounds along the Missouri River around Kansas City, Missouri, in many respects bears a strong resemblance to *Oenothera cruciata* Nutt. of the east, and I have often been tempted to refer it to that species. It differs, however, in having (1) an abruptly narrowed capsule, (2) short buds, (3) shorter, less acuminate sepals, (4) inconspicuous sepal tips, (5) less pubescent capsules, and (6) broader, more obcordate petals. I cannot resist the belief that this form may be a mutant produced naturally in much the same manner as Prof. de Vries secured mutants in cultivated plants. This belief is based upon its distinct and largely constant characters, while at the same time it seems always to occur in the vicinity of more typical plants. If this belief is well founded, it answers an inquiry propounded by authors as to the occurrence of these mutants in nature, and in this light points to an interesting field for observation.

Less noticeable variations in *O. biennis* are of common occurrence around Kansas City. Indeed, as a whole the species seems to be in a very variable state in that neighborhood, and certainly a long-continued series of observations on plants produced from seeds collected there would yield interesting results.