longer: bracts, pedicels, and calyx glandular-pubescent: corolla tube one-half longer to nearly twice as long as the calyx lobes.

The strongest character of the variety is its glandular inflorescence and its longer corolla tube. Represented by NELSON and MACBRIDE'S no. 1192 from Ketchum, July 19, 1911, found among the sagebrush on the river bottom lands.

Gilia Burleyana, n. sp.—Perennial from a completely lignified, rather large root, with a more or less branched caudex, producing few–many slender leafy suberect stems, 15–30 cm. high: pubescence scanty, soft and crisped, more abundant on stems and inflorescence than on the leaves: leaves alternate, small, numerous, entire, linear, 1-nerved, slightly thickened on the margins, mucronate-tipped, 1–4 cm. long: inflorescence capitate, or of 2 or more heads in a terminal congested corymb: flowers numerous, small and very crowded: calyx tube delicately scarious, twice as long as the greenish hirsute subulate mucronate lobes: corolla white, tubular, with more or less reflexed lobes half as long as the tube; tube less than 5 mm. long, slightly exceeding the calyx, obscurely pubescent within: anthers exserted; filaments inserted in the sinuses, shorter than the corolla lobes: style about equalling the stamens: ovules solitary in the cells, usually only one maturing and producing an inequilaterally distended capsule: seed large, oblong, slightly curved as is also the embryo, developing mucilage and spiracles when wetted.

This rather extraordinarily strong species falls into the section ELAPHOCERA Nutt. as arranged by Dr. BRAND in his recent monograph. Until now this section contained no perennials.

This species is named in honor of Mr. D. E. BURLEY, general passenger agent of the Oregon Short Line Railroad Company, whose cordial cooperation and intelligent interest in scientific work is so greatly appreciated. The type of the species is NELSON and MACBRIDE'S no. 1126, from loose white clay banks, a few miles from King Hill, Idaho, July 16, 1911.

Cryptanthe scoparia, n. sp.—About 15 cm. high, fastigiately branched from the base and upward, the erect branchlets broom-like in their compactness: pubescence of a few stiff hispid spreading hairs and a rather close layer of short white appressed ones: leaves linear, the hispid hairs from pustulate bases: racemes numerous, 3–6 cm. long at maturity: fruiting calyces numerous and rather crowded on the rachis: sepals very narrow, but thick, bluntly

subulate, 4–5 mm. long in fruit: corolla not seen: nutlets 4, about 2 mm. long, narrowly conical, attached their whole length by an open but narrow groove to a slender-subulate gynobase, the small areola at base scarcely forked, closely muricate with silvery-gray spinellae on a brown background.

Material in this genus is assigned with difficulty. Floral characters give but little clue. Aspect and the nutlets are the most reliable characters. Even these seem to vary much, but after making due allowance for this fact, the present specimens cannot be referred to *C. multicaulis* A. Nels., BOT. GAZ. **30**:194, nor to *C. grisea* Greene, Pitt. **5**:53, apparently the two nearest allies. Both of these differ essentially as to the nutlets.

The type is NELSON and MACBRIDE'S no. 1311, from sagebrush plains, near Minidoka, July 24, 1911.

PENTSTEMON CONFERTUS Dougl.—Perhaps in no group of *Pentstemon* does a tendency to vary with every change in the ecological conditions manifest itself so fully as in *P. confertus* and its allies. In this group there are three rather strongly marked species: *P. attenuatus*, *P. confertus*, and *P. procerus*, all by DOUGLAS. In recent years several others have been added, some as species and some merely as varieties. How many of these should stand may not yet be said, but certainly not all of them. The undue multiplication of species might be held measurably in check if we could reach some agreement as to the relative importance of the characters ordinarily relied upon in describing these plants. The diagnostic characters mostly used are (1) pubescence in corolla throat and on the sterile filament, (2) shape and size of the corolla and the calyx lobes, (3) glandulosity of the inflorescence, (4) pubescence on the herbage, (5) color of the corolla. Now it is evident that if one phytographer considers one of these as of fundamental value in determining relationship, and another takes one of the other characters as basic, and a third still another, and so on, the number of species that may be described by the rearrangement of these characters becomes merely a problem in permutation. It seems, therefore, that one ought to place first those characters which are probably modified the least by reason of a change of environment, that is, those characters which are fundamentally concerned with the perpetuation of the species should stand first and the others should be serially arranged in the order in which they