twenty years this suspicion has been more than justified and many intelligent readers say they either do not read or do not believe the stuff peddled as science by most newspapers. Under such conditions why should the reading public take any interest in popular science writing? For killing this interest the press services, feature syndicates and syndicated newspapers (aided and abetted by renegade scientists and pseudo-scientists) are to blame rather than individual newspapers. This is partly because of commercialized ideas of service, partly because of the mass of material handled and partly because of remoteness from contact with the reading public.

The lack of interest in scientific matter is also probably increased to some extent by the fact which Dr. Slosson mentions as making it appear strange, *i. e.,* the increased teaching of science in our schools. The well informed student is thereby made more critical of the material presented. At the same time his parents become more cautious in reading or referring to it because they fear his ridicule when some point is raised involving inaccurate or garbled press reports.

In my own case I admit very freely that I am fully in sympathy with the man who hesitates to try popular science writing because of its unsavory reputation. I sometimes have a very distinct feeling of disgust when I find an article which I have tried to compose accurately and which I have taken especial pains to verify, printed in close proximity to one of the florid, vacuous, or untruthful type. On the other hand there is a lot of satisfaction when it gets on the editorial page in dignified company, as sometimes occurs.

For nearly three years our institution has been sending out to a number of California newspapers (our present mailing list is fifty-three) biological feature articles written by myself. These have been sent at intervals of one or two weeks free of charge, partly as a matter of experiment but mainly as a sort of university extension activity. We are convinced that the service has educational value and that it is helping to popularize true science. I have myself been surprised at times by the interest expressed in certain articles by people whom I would not have expected to read them, much less express appreciation of them. I have personally interviewed about sixty editors and have had interesting correspondence with others. A large number have shown such interest in my material that I am convinced that the general public is interested in good stuff if properly presented. If eight or nine out of every ten editors express interest in carefully verified scientific material written in popular (non technical and simple and direct) style I am inclined to think that a similar percentage of intelligent readers will do so if one will take time to gain their confidence.

I appreciate the difficulties confronting Dr. Slosson and Science Service and, like him, I am impatient at delay but when I think about how badly the American public has been served in regard to scientific news I realize that it will take long and hard work by a lot of people to get popular science writing on a basis to inspire confidence. There is always the risk that one who finds he can write in popular style will become more interested in the popular side of it than in the science (truth telling) side of writing and will become unreliable, as has often occurred in the past. Hence it is quite evident that the great need is not only for writers of popular style, of scientific training and ability, but also of high ideals of service which can not be broken down under the stress of temptation.

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TWO NEW WESTERN WEEDS

DURING the past year two plants, which threaten to become weeds of some importance in the arid and alkaline regions of the West, have been received from the western states. One of these is *Bassia hyssopifolia* (Pall.) Kuntze, a member of the family Chenopodiaceæ, originally described from the region of the Caspian Sea. It apparently has never been recorded as occurring in this country. The first collection was made at Fallon, Nevada, July 28, 1919, by Ivar Tidestrom (No. 10755), and a considerable amount of material for distribution has recently been sent me by F. B. Head-

ley, superintendent of the Newlands Experiment Farm, Fallon, Nevada, which he collected at that place in August, 1921. Mr. Headley reports that the plant is becoming very abundant in that section, but that it has not yet invaded fields of growing crops on good soil, so that it may not prove to be a serious pest. It makes a rank growth on soil which is too alkaline for the usual cultivated crops, and is found in fields which have received no irrigation as well as in those which have been frequently irrigated. Additional specimens have recently been received at the U. S. National Herbarium collected by Professor H. M. Hall (No. 11751) at Los Baños, Merced County, California, October 10, 1921, and by Elias Nelson (No. 1002) at Yakima, Washington, October 3, 1921. Mr. Nelson reports that this plant has appeared during the past five years in the Yakima Valley, where it is spreading, and that it is eaten greedily by stock.

Bassia hyssopifolia is an annual, with much the habit of *Chenopodium album*. The flowers are glomerulate in the axils of small bracts, and are borne in short or elongate slender paniculately arranged woolly spikes, at first usually dense, later elongate and interrupted. Each of the five perianth segments at maturity bears on its back a spine incurved into a hook.

A second weed which apparently has not been reported from this country is *Centaurea picris* Pall., also a native of the Caucasus. Specimens were first recived in May, 1921, from Mr. C. O. Townsend, who reported that the plant was said to be a bad weed in the vicinity of Salt Lake City. Specimens from Idaho Falls, Idaho, collected by Miss Ayres of the Idaho Seed Laboratory, have been forwarded during the past year to Mr. E. Brown of the United States Department of Agriculture by Miss Anna M. Lute of the Colorado Seed Laboratory. Miss Ayres reports that the plant is becoming a serious pest in some parts of Idaho. The species has also been collected during the past year at Clifton, Kansas, by Mr. J. W. Head. Mrs. E. P. Harling of the Kansas State Agricultural College, who has investigated this occurrence, believes that the species may have been introduced in Turkestan alfalfa seed. The only North American specimen in the National Herbarium is one collected at Courtney, Missouri, in 1914, by B. F. Bush (No. 7152).

Centaurea picris is one of the knapweeds or star-thistles of the Old World, numbering several hundred species, some of which have become weeds in this country, while a few others are cultivated for their flowers or foliage. It is a several-stemmed perennial, somewhat tomentose or glabrate, with pinnatifid or dentate lower leaves, smaller and entire upper ones, and rosy or pink medium-sized discoid heads, and is especially characterized among the species known from this country by its involucral characters. The phyllaries are roundish to oblong, with greenish bases and scarious whitish obtuse to acuminate entire or subentire appendages, those of the inner phyllaries somewhat pilose.

It is evident that both of these plants find in the arid alkaline regions of the West a habitat similar to that of their Old World home, and unless measures are taken for their destruction, they may become serious pests, as has been the case in recent years with such plants as the "Russian thistle" (*Salsola pestifer*) and the prickly lettuce (*Lactuca scariola integrata*).

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CAT-TAIL (TYPHA LATIFOLIA) AS A FEED

EXPERIMENTS conducted on the writer's farm demonstrate the practical value of cat-tail as a feed for hogs. Sixty head were turned into a three-acre cat-tail swamp, and obtained sufficient nutriment from the rhizomes to keep them in good flesh for three months. No illness or digestive disturbance was noted.

The following table compares yellow (raw) corn with cat-tail flour, as analyzed by J. A. Le Clerc:

	Corn	Cat-tail
Moisture	6.96	7.35
Ash	0.82	2.84
Fat	2.82	0.65
Protein	7.88	7.75
Carbohydrate	80.83	81.41

The large amount of food material contained