ported in 1923, stated, "This test . . . is surely convincing proof that the masking effect described is not necessarily a function of the cochlea of the same ear . . . but may more probably be a property of the auditory nerves, or even of the acoustic centers of the brain itself." Davis and Derbyshire's recent work[2] indicates that the mechanism is peripheral. They define auditory masking as "the diminution of audibility of one sound caused by the presence of a second sound." This is obviously a phenomenological definition, and makes no implication concerning the mechanism. Troland,[6] in his "Psychophysiology" (p. 217 *ff.*) has used the term in much the same way. This usage is typical; many other cases could be cited.

Reference to Robert's report[3] reveals that he did not use "masking" in a restricted sense, for in discussing his electrical anesthesia he says "Y a-t-il eu véritablement anesthésie; ou faut-il considérer l'action de l'électricité dans ces cas comme masquant simplement la douleur?" and further mentions that "Un soufflet, par exemple, donné à un malade au moment de l'ouverture d'un abcès, masquera la douleur du coup de bistouri, etc." His conclusion seems to have been that there was "véritablement anesthésie" rather than "anesthésie de diversion" or masking.

It would seem that confusion could best be avoided, particularly in auditory terminology, by using the term "masking" when appropriate, as descriptive of a common phenomenon and without any implications as to where the phenomenon is produced.

FRANKLIN HENRY
UNIVERSITY OF CALIFORNIA, BERKELEY

A CENTRAL TREE SEED LABORATORY

THE movement to establish a central laboratory for research and testing of tree seeds and seeds of woody shrubs of all kinds is gaining impetus. The Botanical Society of America, Ecological Society of America and American Society of Plant Physiologists at their respective business meetings at St. Louis early in January, 1936, passed resolutions favoring the establishment of such a laboratory.

The need for such a central agency has been present for a long time, as pointed out by the writer in previous years. Ever since reforestation became an important activity of public agencies, and private planting increased in volume, it has become very important to know, for instance, the danger, if any, of movement of seed from different origins, and presumably different local races. The evidence is slowly accumulating that even indigenous American trees may have local adaptations, and that indiscriminate mixture of seeds of different origins not only endangers the success of plantations, but may even eventually deteriorate natural stands by cross pollination. In any case failure to start investigations into such matters 20 or 30 years ago is most unfortunate. Many aspects of seed origin investigations involve the seed itself; physiological and serological tests have been used with some success to identify seed of different origins. Since such problems are country-wide, not to say world-wide, and can be attacked and directed best from a central station, a laboratory devoted exclusively to seed studies is highly desirable.

Control of origin of seeds and certification of origin involves some sort of machinery for delimiting zones, inspection of collection, etc. Such organizations exist in many European countries, but at present no officially certified seed can be obtained in this country in spite of wide-spread foreign demand for such American seed. Legislation directed towards providing for control of forest seed origin is urgently needed. A central seed laboratory forms the logical nucleus around which a control service can be developed. Provision has been made for control of seed origin in a bill prepared for presentation to this session of Congress,[1] but none for its administration. Such a duty might properly fall to a central seed laboratory.

Shrubs and other forest plants of value as food for game have been little cultivated artificially, and almost nothing is known of the peculiarities of their seed. Recent use of such plants in wild-life sanctuaries and many rarely cultivated species in erosion control work and for shelterbelts has caused an urgent demand for information on their seed habits.

Routine testing of purity and viability of forest seeds would form an important function of such a central laboratory. Such service should be available at a regular fee to commercial seed dealers, so that the purchaser would have some guaranty of the quality of seed he purchases, and nurserymen and other consumers would have data by which to guide them in the amount of seed to use. Existing state seed laboratories handling agricultural seed have neither the equipment nor experience required for uniform results in tree seed-testing.

There are other problems, such as kiln-drying and extraction, which are peculiar to tree seeds and would naturally belong to the same organization handling seed-testing. At present each regional forest experiment station does some seed-testing, and most of them have some projects aimed at the importance of seed origin. These should be continued, but coordinated with a comprehensive national investigation. Testing can be standardized and improved only by a central agency.

[6] L. T. Troland, "The Principles of Psychophysiology," Van Nostrand, New York, 1930, pp. 397.

[1] National Forest Conservation Bill. Sec. 9, Amendment to Act of June 7, 1924—43 Stat. 653, Sec. 11.

An independent forest seed laboratory might well be located at one of the existing forest experiment stations or at the Forest Products Laboratory, Madison, Wisconsin.

HENRY I. BALDWIN

HILLSBORO, N. H.

A BIT OF ILL-CONSIDERED CONSERVATION LEGISLATION

FOR some obscure reason, when bills are being framed for submission to legislative bodies, expert advice as to plant names is usually not obtained. Every few years some organization or other sends a bill to Congress to make a certain plant the national flower of the United States, and in every case in which a copy of such a bill has come to the attention of the writer, the scientific name of a foreign plant has been attached. Thus the columbine bill specified *Aquilegia vulgaris,* which is the European species; and the daisy bill *Bellis perennis,* the English daisy. Fortunately all such bills have been referred to the Committee on Library and have never been reported out.

The states have not fared quite so well, however. Not only have several of them designated as state flowers weeds introduced from other countries, but one, Minnesota, once officially selected for its emblem *Cypripedium calceolus,* the European lady-slipper, which does not grow in that state, or, for that matter, in any part of the United States.

Conservationists have now started similar activities. On May 18, 1935, the Senate and General Assembly of the state of New Jersey enacted that "It shall be unlawful to take for the purpose of sale, sell, or expose for sale, any wild *solanum dulcamara,* commonly known as bittersweet. . . ." Actually the plant designated is a weed of waste places, the destruction of which should be encouraged because it harbors potato-beetles and other pests; and it wilts too quickly for any one to bother to sell it anyway. Had the backers of this legislation only sought a little expert advice, they would have learned that the name of the plant they really wanted to protect was *Celastrus scandens.*

EDGAR T. WHERRY

UNIVERSITY OF PENNSYLVANIA

SPECIAL CORRESPONDENCE

JOINT GEOLOGICAL AND PREHISTORIC STUDIES OF THE LATE CENOZOIC IN INDIA

Two previous expeditions to the Northwest-Himalaya had given de Terra sufficient geological data to show that Kashmir and the adjoining plains of the Punjab would yield important information on the relationship of glaciations and crustal movements to early man and his cultures. Scattered finds of some Paleolithic artifacts and evidences for Pleistocene and subrecent mountain uplifts which he had collected in 1932 seemed promising enough as to warrant a special study of this subject.

The Carnegie Institution of Washington and the American Philosophical Society at Philadelphia most generously granted most of the funds necessary for carrying out a program of research in which several institutions cooperated. Foremost amongst these was the Royal Society and Cambridge University, who enabled Paterson to collaborate, and Yale University. The Geological Survey of India, by kindness of its directors, Sir Leigh Fermor and Dr. A. M. Heron, lent the valuable assistance of Mr. N. K. N. Aiyengar, whose task was not only to gather additional fossil material of the Siwalik fauna, but especially to collect fossil primate remains. The expedition leader asked Dr. P. Teilhard de Chardin, of the Cenozoic Research Laboratory in Peiping, to participate, and his association, which lasted shortly over three months, was of the greatest assistance. Mr. D. Sen, of Calcutta University, acted as field assistant, and temporarily Mr. H. J. H. Drummond and Mr. Krishnaswami associated themselves with our party.

Naturally the investigations had to be based on a careful stratigraphy of the Pleistocene. The glacial cycle in Kashmir, which, in a general way, had previously been recognized by Giotto Dainelli, provided an ideal means by which it was possible to work out a standard sequence of geological events for the mountainous tract. Such data could then be used in correlating the late and post-Siwalik formations of the adjoining foothills and plains with the glacial and interglacial deposits in the north. This in turn would enable us to date any prehistoric cultures found *in situ,* and also to check the stratigraphical results thus gained against the paleontological records on which had previously been based the stratigraphy and age of the Siwalik formations.

The work in Kashmir was carried out in this way, that Paterson undertook a survey on the Himalayan slope of the Kashmir basin, and in the foothills of Poonch, while de Terra studied the basin filling and the southern flank along the Pir Panjal down to the plains at Jammu. Pleistocene geology centers here around the glacial cycle. Its evidences were found in the morphology of the glaciated valleys and in the sedimentary records of both glacial and interglacial stages.