THE fourth International Leprosy Conference, of which Dr. Victor G. Heiser is president, will be held in Cairo, Egypt, beginning on March 21, 1938. This conference is being organized by the International Leprosy Association and is the first international conference to be arranged by this association since its inauguration in 1931. Three previous conferences have been held—at Berlin in 1897, at Bergen in 1909 and at Strasbourg in 1923. The Egyptian Government is inviting all countries concerned to send official delegates. In addition to these, physicians and others interested in the subject are invited to be present. Full information can be obtained from the Secretary of the International Leprosy Association, 131 Baker Street, London, W.1.

WE learn from the *Journal* of the American Medical Association that the second International Congress for Protecting Children will be held at Rome, from October 4 to 8. The first one was held at Paris in 1933. The welfare of children will be discussed in separate sections from social, forensic, hygienic and sanitary points of view. The topic for discussion at the hygienic and sanitary sections will be prevention of infant mortality due to nutritional diseases, establishment of climatic colonies for children of preschool age, care of the health of European children living in colonies, physical education of children attending grammar schools and the prevention of inferiority in the health of illegitimate children. The general secretary to the congress is Professor G. B. Allaria, of the pediatric clinic of Turin. Shortly before the congress takes place, the fourth International Congress of Pediatrics will be held in Rome.

THE twenty-fourth annual meeting of the French Hygiene Congress will be held on October 18 and 19 in the Pasteur Institute, Paris. The president this year is Dr. Lesné, a pediatrician. The subjects selected for special discussion are: (1) overworked school children from the medical, social and administrative points of view, (2) prophylaxis of tuberculosis in schools, (3) backward children in city schools and (4) healthful milk. Those who wish to take part in the program may write to Dr. R. Dujarric de la Rivière, 28 rue du Docteur-Roux, Paris (15).

THE quarterly meeting of the Grand Council of the British Empire Cancer Campaign was held on July 12. *Nature* states that on the recommendation of the Scientific Advisory Committee, the following grants were approved: £500 to Dr. P. M. F. Bishop, at Guy's Hospital, for the expenses for one year of certain investigations in regard to endocrine therapy in relation to cancer; £250 to Professor G. I. Finch, at the Imperial College of Science and Technology, for the expenses of an investigation, on behalf of the Scientific Advisory Committee, into the nature and structure of carcinogenic compounds; and £160 to Dr. P. R. Peacock, at the Glasgow Royal Cancer Hospital, for the purchase of special apparatus for the continuation of his cancer research. On the recommendation of the Joint Committee of the Campaign and of Mount Vernon Hospital, Dr. G. Cranston Fairchild was reappointed the William Morris research fellow in radiology at that hospital for a further period of one year. The William Morris research fellowship was established five years ago by a donation of £25,000 by Lord Nuffield.

DISCUSSION

A NEW HOUSEHOLD PALM, NEANTHE BELLA

A GRACEFUL diminutive palm discovered in eastern Guatemala in 1902 has proved well adapted to household cultivation, flowering and seeding freely under living-room conditions, enriching domestic life. Millions of people in all civilized countries are devoted to the care of house plants, finding solace in an indoor exercise of the gardening instinct that opened to our remote ancestors the course of human progress. Palms have special attractions of form and sentiment, though most of the tropical species are difficult to domesticate and rarely reach the fruiting stage, even in large conservatories.

The name Neanthe means youthful-flowering, alluding to inflorescences often appearing on plants only two or three years old, and to a like precocity of the early seedling leaves, in having the same pinnate form as the leaves of older plants. Most kinds of palms have simple grass-like leaves at first, and several years may elapse before the palm-like "character-leaves" appear that render the plants attractive. The successive leaf-forms are supposed to recapitulate the course of plant evolution, like the embryonic characters of animals. The historic Chamaerops palm at Padua drew Goethe's attention in September, 1786, to the basic concept of morphology and evolution, "the original identity of all of the parts of plants."

Suppression of the preliminary leaf-forms greatly facilitates the use of Neanthe as a household palm; even the young plants only a few inches high having a notable grace and beauty that warrant the name *bella,* rendered by Valpy as "pretty, charming, fine, neat, nice." Other "dwarf" palms are known, some

lacking upright trunks or producing only simple leaves, but Neanthe has retained in miniature proportions the form of a slender tree-palm with a spreading crown of foliage, the leaf-blades and inflorescences usually less than a foot long, the trunk only half an inch thick, and the roots accommodated in a 5-inch pot, or even 4-inch, if set in a jar or double-potted for table or office use.

The wild palms grew in rather low open forests near the summits of precipitous limestone mountains, at altitudes around 3,000 feet, in the Department of Alta Vera Paz, between Senaju and Cajabon, a coffee-growing district of great natural beauty sparsely inhabited by the Kekchi people, one of the primitive Mayan tribes. The rainfall is heavy, but the steeper slopes have only a thin layer of humus, so that even short periods of dry weather induce stress conditions in the undergrowth, a habitat for developing the two particular adaptations of a household plant, tolerance of shade and tolerance of drought. The palm extends to lower altitudes and longer dry seasons in the adjacent Department of Peten, including the forest-covered sites of the ancient Maya cities of Tikal and Uaxactun.

A few of the small palms were carried home from Alta Vera Paz by the simple expedient of wrapping the roots in a little of the forest leaf-mold and rolling the entire plant in an open funnel of waxed paper. Several weeks of travel were survived and nearly 30 years in a Maryland farm home, where temperatures in winter nights often were low, but the palms continued to thrive, with only the usual care of potted plants. Flowers appeared every year, but the sexes separate as in the date palm, and no seeds developed until hand-pollination was begun in May, 1927. Eventually the original palms were placed in a greenhouse to facilitate the production of seeds, and are still vigorous, with trunks three to five feet long, showing 60 to 80 joints. An adult palm develops three or four inflorescences every year, with globular pale yellow flowers in an alternating two-ranked arrangement along the slender simple branches.

Pollination is simplified by placing several male flowers in a small dish and removing the corollas, thus exposing the dark anther cells, with the pollen escaping as a white dust. The grains adhere readily to a fine brush or shred of cotton, for lightly touching the female flowers. The fruits swell in a few days, but take nearly a year to ripen, eventually turning dark purple, and the inflorescence orange-yellow. A hundred seeds or more may be produced on a single inflorescence, and germinate in three to six months.

The flowering period extends through several weeks, but each inflorescence is in functional condition for only two or three days. Household propagation is practicable, but several palms should be accessible, as in neighborhood groups of plant lovers, for pollen to be available when required. Also in high schools and colleges Neanthe may be propagated for educational use. No other member of the entire group of palms affords similar opportunities for observing the floral specialization of the two sexes, following the processes of reproduction and development, or determining the inheritance of variations in foliage and other characters.

The floral specializations of Neanthe include a carneous monopetalous corolla in both sexes, valvate lobes and a narrow triangular aperture occupied in the male flower by a green peltate pistillode, much larger than the functional pistil concealed in the female flower, so that the sexes have been confused. A central depression of the pistillode often secretes a spherical drop of nectar, glistening in the sunlight. An osseous endocarp enclosing the spherical seed is another diagnostic feature. Foliar specializations may be seen in the open, overlapping leaf-sheaths, laterally compressed petioles and evenly tapering single-veined pinnae, usually 14 or 15 on each side of the rachis, in the type species.

Neanthe belongs to a group of small palms, the Chamaedorea family, though remote from the type of the genus Chamaedorea, a palm from Venezuela first described and illustrated by Jacquin in 1797 as *Borassus pinnatifrons,* with broad many-veined pinnae, the male petals separating near the base but connate at the apex, the female petals imbricate and the stigmas emergent. A genus Collinia was proposed by Liebmann in 1845 for *Chamaedorea elegans,* overlooking a Collinia suggested by Rafinesque in 1819 for a plant of the borage family, and also Collania in the amaryllis family. Liebmann gave no generic description, and that supplied by Oersted in 1858 had reference to drawings of floral structure published by Nees von Esenbeck in 1834 from conservatory plants with golden-yellow flowers and a stout cylindric pistillode, unlike the household palm, which also was considered at first as a form of *Chamaedorea elegans.*

The original *Chamaedorea elegans,* named by Martius in 1830 from the district of Vera Cruz, was a much larger palm, the trunk three times as thick, the leaves nearly 4 feet long, the pinnae attaining 20 on a side, a foot long and nearly an inch wide. A leaf of such proportions, collected by Liebmann near Jalapa in March, 1841, has come to the U. S. National Herbarium from the Copenhagen Museum. The palm figured as *Chamaedorea elegans* in Curtis's *Botanical Magazine,* 1855, plate 4848, belongs to a different group, but plate 7959, published in 1904 as *Chamaedorea pulchella,* may be close to the original *elegans.*

A specimen in the U. S. National Herbarium collected on April 7, 1902, near Sepacuité has been designated as the type of *Neanthe bella.* The forms of the pistillodes eventually may characterize different genera, but two other species may be referred provisionally:

Neanthe elegans (Martius), the larger palm that Martius described, with a three-angled pistillode, and *Neanthe neesiana,* to serve as a specific name for the golden-flowered palm figured by Nees and cited by Oersted, with the pistillode nearly cylindric and the stigmatic rim very narrow.

O. F. COOK

BUREAU OF PLANT INDUSTRY
U. S. DEPARTMENT OF AGRICULTURE

"RACES" AND "HOMING" OF PACIFIC SALMON

IN a recent communication Professor A. G. Huntsman[1] objects to my[2] use of the word "races" in referring to the local populations of Pacific salmon, on the ground that the genetic character of the observed differences in local populations is not proved, and he infers that without this proof my argument that the Pacific salmon show a homing reaction is invalidated.

As to the first point: The word "race" is used, and properly, in referring to local populations that are distinguishable, regardless of whether the differences are genetic or environmental. O. E. D. gives as one definition, "A group or class of persons, animals, or things, having some common feature or features." In dealing with the salmon of the Pacific Coast many of us have been accustomed to use the word in this sense and without implications as to the nature of the differences. While I believe that many of these differences are genetic I concede that the rigid experimental proof is lacking; but I think that the point is not relevant to the discussion of "homing."

As to the second point: My argument does not at all require that the observed differences in the local populations be genetic. If these local populations (or races) are distinguishable it does not matter whether the differences are genetic, the result of environmental influences during the early life in fresh water or the later life at sea or are artificial. If large numbers of the Pacific salmon travel beyond the "zone of river influence" and if the fish after distribution into their spawning streams show significant differences, whether the differences be genetic or not, "the simplest theory that will adequately explain . . . these facts is that the salmon do return predominantly to their home streams."

WILLIS H. RICH

STANFORD UNIVERSITY

THE FISH BOWL AS A FIRE HAZARD

THE recent note by Julian H. Lewis,[1] "A Possible Source of Laboratory Fires," recalls an experience in our laboratory early this spring.

[1] SCIENCE, 85: 582–583.
[2] SCIENCE, 85: 477–478.
[1] SCIENCE, 85: 605, June 25, 1937.

Smoke was discovered coming from the unpainted woodwork back of the large bottle in which our distilled water is collected. The sun was shining directly on the bottle and the woodwork in question is but an inch or so removed from the back of the bottle, which has a diameter of about 18 inches and is roughly spherical in shape. Examination of the woodwork showed a number of rather deeply charred lines where the late afternoon sun's image formed by the bottle had burned its way along the wood. The lines were short, for it happens that the sun can shine directly on this bottle for but about an hour on any one day. We soon discovered further that the period of daily exposure of the bottle to the sun's rays was but a few weeks in length, in spring and again in fall. This burning has presumably been going on for about ten years.

It seemed at first odd to us that enough heat from the sun should be transmitted through the water to start combustion. Our intuition is probably due to the common use of a water cell to filter out the longer waves in a projection lantern in order to avoid overheating the slide. Inquiry to insurance companies brought out the fact that fires are occasionally caused by the "burning glass" action of the familiar fish bowl. Also the following brief consideration of the fundamental principles involved shows that the goldfish bowl in the direct sunshine should be regarded as a real fire hazard.

As may be found in standard text-books, the transmission data for water as a function of the wave-length of the radiation incident upon it shows great absorption for the longer wave-lengths. This absorption is just noticeable at the red end of the visible spectrum, the transmission falling to about 50 per cent. at 1,000 m μ and about 20 per cent. at 1,200 m μ.

Solar radiation arriving at the earth's surface has its peak power at about 500 m μ and falls to about 10 per cent. of this value at 1,200 m μ and 1 per cent. at 2,000 m μ. Thus, due to the sun's high temperature, its radiated power has its maximum in the visible region of the spectrum. Practically all the sun's heating effect is in and near the visible spectrum, namely, in the wave-length range which is transmitted by water.

The incandescent lamp, on the other hand, which is used as a light source for the projection lantern has a filament temperature but little over 3,000° K, as a consequence of which the peak of its radiation characteristic comes around 1,000 m μ. It has scarcely started to fall from this peak at 1,200 m μ and has roughly 70 per cent. of its total radiated energy in those wave-lengths which are longer than those transmitted by water.

Thus, for a tungsten filament lamp source, about two thirds of the radiated energy may be absorbed in a