buried in accounts of other animals that it has only recently been exhumed by H. Shrinivasa Rao, Deputy Fisheries Adviser to the Government of India, who communicated the facts to me.

Folliculinids fasten their dwellings to all sorts of inanimate and animate objects. Some seem to have uncanny ability to search out concealed places and may establish their dwellings within those abandoned by other small animals. Some locate on the outside of hydroids, and it is in association with the latter that they have been found in India.

Many small jellyfish that swim free in the ocean separated themselves from hydroids, like plants branching, and firmly fixed to objects of the ocean floor. Among these the genera called *Tima*, *Eirene*, and *Phortis* are much alike, and even specialists have not agreed as to which name to use. MacCrady, the pioneer student of jellyfish in America, described a species of *Phortis* from Charleston, South Carolina, and W. K. Brooks, in his studies of jellyfish of Beaufort, North Carolina, was able, in 1883, to rear the hydroid phase from this same rare jellyfish.

Another species of *Phortis* shines with exceptionally strong blue-green phosphorescence. In 1905 Browne took from the sea off Ceylon a jellyfish he named *Eirene ceylonensis;* however, Mayer, in his *Jellyfish of the world*, decided that this was really a *Phortis*—a conclusion also reached by N. Annandale when in 1915, as superintendent of the Indian Museum, he reared from this jellyfish the little hydroid he had discovered in 1906 and identified as *Campanulina.* The same sort of jellyfish taken from the sea off Ceylon by Browne suddenly appeared in great numbers in July 1915, more than 1,000 miles away, in a brackish canal near Calcutta, in the delta of the Ganges. The canal water had a salinity of but 1.0085, reduced to 15°C. In this canal, "far removed from the sea though connected at one point with the tidal waters of the Hooghly," the jellyfish were no longer found in September, when the monsoon rains probably further diluted the brackish water. From these little jelly-fish less than an inch in diameter were reared the *Campanulina* hydroids, scarcely visible to the naked eye. In this study the work of Annandale was continued by R. E. Lloyd, professor of biology at the Medical College, Bengal, and their combined results were published under the title "Hydrozoon *Campanulina ceylonensis* (Browne)" (*Rec. Ind. Museum, Calcutta*, 1916, **12**, 49–57). We quote from Lloyd's detailed account the following sentence—sole evidence of the occurrence of folliculinids in India: "The hydroid first found at Port Canning was living in association with the protozoan *Folliculina* and this organism also occurred among the colonies taken from the canal."

Dr. Rao's search in the collections of the Indian Museum revealed nothing in the way of slides or material bearing upon these folliculinids. Apparently Prof. Lloyd did not identify the species of folliculinid he observed, but as to Lloyd's identification of the group Dr. Rao writes that he has "no reason to doubt his identification of the infusorians he found on the hydroids of Port Canning."

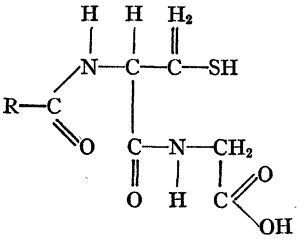
It is possible that other casual references to the occurrence of folliculinids in some corner of the world may remain hidden in the vast literature. Should anyone discover such hidden records, I would greatly appreciate being guided to them. (E. A. ANDREWS, *The Johns Hopkins University, Baltimore, Maryland.*)

The differentiation of the pathogenic species of *Sporotrichum* has always presented difficulties. It has been known since 1915 that carbohydrate fermentations, pigment formation, and production of chlamydospores are variable factors and cannot be used for the identification of species. In fact, the tendency among mycologists today is to regard the *Sporotrichum* pathogenic to man as one species.

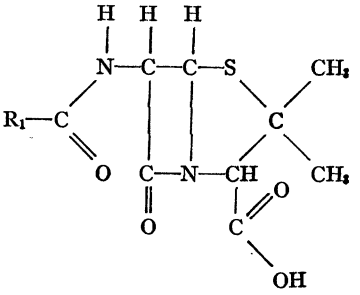
Sixteen strains of *Sporotrichum* representing examples of *S. schenckii*, *S. beurmanni*, *S. asteroides*, and *Rhinocladium equinum*, originating in America, Europe, and South Africa, were studied. Extensive agglutination and absorption experiments showed that these *Sporotricha* all have a common antigenic factor.

Details of this work are being published elsewhere. (H. I. LURIE, *South African Institute for Medical Research, Johannesburg.*)

With reference to the interesting discussion between C. S. Leonard (*Science*, November 29, 1946, pp.501–502) and C. J. Cavallito (*Science*, February 28, pp. 235–236) about the mode of action of penicillin, I should like to call attention to an interesting circumstance which I did not find mentioned in the literature available to me, *i.e.* the remarkable structural resemblance between penicillin and glutathione. In fact, the thiazolidine ring of penicillin may be imagined as resulting from a double ring closure between the β-methyl group of cysteine and the amino group of glycine on one side and between the SH group of cysteine and the α-methyl group of glycine linked together by a (dimethyl)-methyl radical on the other side (Fig. 1).



Glutathione



Penicillin

FIG. 1

From this point of view the terminal groups of penicillin would be characterized by a double ring formed between certain members of the open chains of the cysteyl-glycine radical through the intervention of a dimethyl methane, which would blockade irreversibly the SH group of cysteine. The glutamyl radical of glutathione is replaced with different other acyl radicals in the different classes of penicillin (pentanoyl, heptanoyl, valeryl, phenylacetyl, etc.).

It would be too far-reaching to draw without experimental basis any conclusion from this circumstance, but one may think of the possibility of penicillin competing with glutathione for enzymatic or other mechanisms important for microbial reproduction. (E. FISCHER, *Experimental Laboratory, S. A. Organa, Santiago, Chile.*)