as being really a porokeratosis rather than a hyperkeratosis. Later atrophy takes place in the diseased areas, which are thus found when the sebaceous glands and the hair follicles are equally destroyed. In addition to these changes there is a slight infiltration of the corium with mononuclear leukocytes, together with disappearance of the elastic network and a thinning of the collagen bundles. This deeper inflammation is probably the sequel of the hyperkeratosis rather than vice versa. The histological facts may be summed up by stating that the disease is a hyperkeratosis with porokeratosis, followed by inflammation of the corium and, finally, atrophy, the hyperkeratosis electing the glandular and follicular apertures, with special reference to the sweat ducts.

Pathology and Therapy of Yaws.—Aldo Castellani (Jour. of Trop. Med., January 1, 1906) concludes that both the lesions and the treatment go to show that yaws (known also as frambesia, parangi, pian, etc.) is distinct from syphilis. The early lesions of yaws show a spirillum, for which he proposes the name Spirocheta pertenius, but this spirocheta does not prove that the disease is identical with syphilis. Large doses of potassium iodide he found useful in yaws, and much more effective than mercury. Some cases recover without treatment.

Mucous Membrane Lesions in Lupus Erythematosus.—Thomas Smith (Brit. Jour. of Dermat., February, 1906) has made a study of fifty-six consecutive cases of lupus erythematosus and has found that sixteen had some affection of the mucous membrane, giving a percentage of 28, which is greater than the prevalent idea. The majority of the patients were unaware of the existence of any lesions in the mouth. All had been patients at the London Hospital recently, the observations having been corroborated by Dr. Sequeira in nearly every case. In no instance of the noted cases was the tongue affected. The mucous membrane lesions were more frequently encountered in cases of the disseminated type. The locality affected was generally the inner surface of the checks. The lesions do not materially affect the course of the disease of the skin and do not appear to demand any special local treatment.

Studies in Beriberi.—Herzog (Philippine Jour. of Science, 1906, i, 169) in two papers discusses beriberi, with special reference to the very obscure question of its etiology. In the first paper the author
gives an account of his work in the Japanese Army Hospital during the
late war. He points out that although the very efficient sanitary arrange¬
ments in the field were successful in combating typhoid fever, dysentery,
scurvy, and typhus fever, beriberi, or kakke, as the Japanese call it,
was not preventable or apparently controllable in the actively employed
army. Herzog gives an account of the work of Okata and Kobubo, who
have isolated a coccus from numbers of cases of beriberi. The blood
of 129 cases was examined, both microscopically and with cultures, and
sixty-five times both methods were successful. In 35 cases the organism
was not found by either method, and in 11 the microscope alone revealed
it, while in 19 cases this method was negative, but successful cultures
were made. The organism usually occurred as a diplococcus, but at
times as a staphylococcus. In smears it was seen both within and
outside of leukocytes. It never showed a capsule or motility. It
grows readily on the usual culture media. All animal inoculations
were unsuccessful. The coccus was isolated by these Japanese authors
twenty-five times from the urine of 34 patients, and obtained fifteen times
from the feces of 45 patients. Herzog obtained it eight times in 30 to
40 attempts at isolation from the urine of patients suffering with beriberi.

The second paper is a more general account of the disease, and is
based upon the study of beriberi as seen in the Philippine Islands.
The various etiological factors for the disease, which have been more
or less hypothetically advanced, are discussed. In order to test the
idea of Donald Ross that the disease is caused by arsenical poisoning,
the hair of the patients was analysed for arsenic, with negative results.
Herzog has undertaken an extensive study of the Okata-Kobubo
coccus, and finds that the strains of the organism which he used corre¬
sponded culturally almost entirely to the characteristics reported by the
Japanese observers. His results with animal inoculations are entirely
negative, although quite extensive. Six series of monkeys, guinea¬
pigs, rabbits, and rats were used, and observed over a long time. Blood
cultures were made from 40 patients with better technique than that
employed by the Japanese, and all were sterile except in 6 cases, in
which the cultures were apparently contaminated. In one fatal case
the Okata-Kobubo coccus was isolated from the much enlarged spleen,
and with this organism all animal experiments were negative. Herzog
was able to produce a very low grade of agglutinating serum by repeated
injections of the organism.

He concludes that beriberi is neither primarily a nutritional disturbance
nor a simple intoxication like lead, alcohol, arsenic, or similar intoxica¬
tions accompanied with multiple peripheral neuritis, but is an infectious
disease. His blood examinations and animal experiments indicate
very strongly that none of the claims brought forward for the discovery
of a specific micro-organism for the disease can be looked upon as
substantiated. Herzog advances the hypothesis that the disease is
due to some organism which gains entrance to the body and then produces
an extracellular toxin, which may be compared to diphtheria and
tetanus toxin, and which, by an accumulative action, gives rise to the
well-characterized anatomical lesions of beriberi.

Researches on Immunity to Carcinoma in Mice.—Ehrlich has found
that by injecting mice with spontaneous or transplanted avirulent