A NEW SALMONEILLA SEROTYPE: *S. NISSII*

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SUMMARY. A new Salmonella serotype ((6),(7),
14:b:-) was described and the designation *S.*
nissii was assigned to it. The strain was
isolated from a sailor who became ill after
eating unripe fruit after leaving Japan.

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The Salmonella serotype described in this report, *Sal-*
monella nissii, (627294) was isolated from the feces of a
sailor on the *S.S. Nissii* who became ill on board following
the eating of unripe fruit after leaving Japan. The organism
was isolated from a stool specimen collected in Vancouver,
but the individual had again sailed by the time a salmonella
isolation had been confirmed.

The biochemical reactions given by strain 627294 were
similar to those given by members of the genus Salmonella
and were typical of those of subgenus I of Kauffmann (1960,
1963). Indole was not produced, the methyl red test was
positive, the Voges-Proskauer test was negative and Sim-
mons' citrate was utilized. Nitrate was reduced to nitrite,
hydrogen sulfide was produced, and lysine and ornithine de-
carboxylases as well as arginine dihydrolase were produced.
Gelatin was not liquefied, growth did not occur in KCN
medium, and urease and phenylalanine deaminase were not
produced. Sodium malonate was not utilized and beta-
galactosidase was not produced (ONPG test, method of Le-
Minor and Ben Hamida, 1962). When tested according to the
method of Kauffmann and Petersen (1956), D-tartrate, L-

tartrate, citrate and mucate were utilized in one day and I-tartrate in two days. Acid and gas were produced rapidly from glucose, dulcitol, arabinose, galactose, inositol, levulose, maltose, mannitol, mannose, sorbitol, trehalose, and xylose. Acid only was produced in rhamnose, and cellobiose was fermented with gas production after 6 days incubation. Lactose, sucrose, salicin, adonitol, glycerol, inulin and raffinose were not utilized.

Strain 627294 belonged to O group C₁, reacted in absorbed single-factor antisera for O antigens 7 and 14, and was agglutinated to the titer of S. eimsbuettel O serum ((6), (7), 14). In reciprocal absorption tests strain 627294 removed all agglutinins from S. eimsbuettel O serum, and S. eimsbuettel removed all agglutinins from an O serum prepared against strain 627294. Hence, the O antigens of strain 627294 were (6), (7), 14.

The strain was monophasic and was agglutinated by a serum prepared against S. paratyphi B phase I H (b) (titer 1/6400) to a dilution of 1/800 only. The H b antigen of strain 627294 was not identical to that found in S. paratyphi B phase I H or to a number of other b-containing serotypes as well. It was, however, agglutinated to the titer of an antiserum prepared against S. bloemfontein phase I H (b), and in absorption tests reduced the titer of that antiserum for the homologous strain from 1/12,800 to 1/800. Similarly, when an antiserum prepared against the flagellar antigen of strain 627294 was absorbed with S. bloemfontein phase I H (b) the titer for the homologous strain was reduced from 1/12,800 to 1/800. Complete absorption was not observed in either instance. S. bloemfontein was first isolated in 1957 in England by Taylor who found (personal communication) that it had an additional b factor not present in the phase I H (b) antigen of S. paratyphi B. Strain 627294 was immobilized when it was inoculated into semisolid medium that contained H serum b, thus indicating that the serotype was monophasic.

Thus the antigenic structure of strain 627294 was determined to be (6), (7), 14:b:-, and the name Salmonella nissii proposed. A culture of strain 627294, the type strain of S. nissii, has been deposited in the American Type Culture Collection.

BACTERIOLOGICAL NOMENCLATURE
AND TAXONOMY

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