AN UNDESCRIBED SALMONELLA SEROTYPE:
S. OAKLAND

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SUMMARY. A previously undescribed Salmonella serotype (6, 7:z:l, 6, (7)) was characterized and the name S. oakland was given to it.

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The purpose of this paper is to describe a recently characterized serotype of Salmonella. This serotype was represented by a single culture (1772-63) which was isolated from a rhinoceros iguana (Metopoceros cornutus) at the Detroit, Michigan Zoo. The biochemical reactions given by culture 1772-63 were characteristic of those given by members of the genus Salmonella and the strain was a typical member of subgenus I of Kauffmann (1960, 1963). Indol was not produced, the methyl red reaction was positive, the Voges-Proskauer test, negative, and growth occurred rapidly on Simmons' citrate medium. Nitrate was reduced to nitrite and hydrogen sulfide was produced but the strain failed to produce urease or phenylalanine deaminase. Gelatin was not liquefied and growth did not occur in KCN medium. Lysine and ornithine were decarboxylated, but an arginine dihydrolase system apparently was lacking. The results of tests for utilization of organic acids (Kauffmann and Petersen, 1956) were as follows: D-tartrate positive in one day, L- and I-tartrates negative, citrate and mucate positive in one day. Sodium malonate was not utilized and β -galactosidase activity was not demonstrated (ONPG test, method of LeMinor and Ben Hamida, 1962). Acid and gas were produced rapidly from glucose, dulcitol, maltose, mannitol, rhamnose, arabinose, xylose, sorbitol, and trehalose and cellobiose was fermented with gas production after six days' incubation. Lactose, sucrose, salicin, inositol, raffinose, adonitol, and glycerol were not utilized.

Culture 1772-63 was a member of Salmonella O antigen group Cl, was agglutinated to the titer of O antiserum prepared with S. thompson (6,7), and removed all agglutinin from that antiserum in absorption tests.

The flagellar antigens of 1772-63 were diphasic and phase 1 was flocculated to the titer of S. poona phase 1 (z) antiserum and, in absorption tests, removed all H agglutinins from that antiserum. Phase 2 was agglutinated actively by antisera derived from antigens 1,2; 1,5; 1,6; and 1,7. When tested with absorbed antisera for factors 2, 5, 6, and 7 it was agglutinated by antisera for both factors 6 and 7. In absorption tests phase 2 of 1772-63 reduced the titer of S. anatum, phase 2 antiserum (1,6) from 1:12,800 to 1:400. On the contrary, the titer of S. bredeney, phase 2 antiserum (1,7) was reduced only from 1:6,400 to 1:3,200. The antigens of phase 2 of culture 1772-63 were characterized as 1,6,7.

Therefore, the antigenic structure of culture 1772-63 was determined to be 6,7;z:1,6,(7) and the designation S. oakland was applied to it.

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