AN UNDESCRIBED SALMONELLA SEROTYPE:
S. CAIRNS

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SUMMARY. A previously undescribed Salmonella serotype (45:k:e,n,z₁₅) was characterized and the name S. cairns was given to it.

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The serotype described in this paper was isolated in July 1966 from the faeces of a 39-year-old aboriginal woman living at a settlement, south of Cairns, Queensland. Two of her family of 10 children had presented with bacillary dysentery, and routine faecal screening was undertaken. The woman was without symptoms at the time of examination. The biochemical reactions given by the culture were characteristic of those given by members of the genus Salmonella and the strain was allocated to subgenus I of Kauffmann (1960). Indole was not produced, the methyl red reaction was positive, the Voges-proskauer test, negative, and growth occurred rapidly on Simmons' citrate medium. 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. In the decarboxylase reactions, lysine and ornithine were positive, but arginine was negative. Sodium malonate was not utilized and β -galactosidase activity was not demonstrated. In the tests for the utilization of organic acids, D-tartrate and mucate were positive, but L-tartrate and M-tartrate were negative. Acid and gas were produced from glucose, xylose and mannitol. Lactose, sucrose, dulcitol and salicin were not utilized.

On serological examination, the isolate agglutinated to titre with somatic antiserum 45. The original culture was in phase 1, and agglutinated to titre with single-factor antiserum k. The second phase was obtained without difficulty, and this proved to be e,n,z₁₅, being confirmed by titration with single factor antiserum z₁₅. The antigenic structure of

the culture was therefore 45:k:e,n,z₁₄. This was confirmed by Dr. Joan Taylor, London and Dr. Le Minor, Paris. The designation S. cairns was applied to the culture.

REFERENCE

- Kauffmann, F. 1960. Two biochemical subdivisions of the genus Salmonella. Acta Pathol. et Microbiol. Scand. 49:393-396.