

Number of longitudinal rows of hooks	Number of hooks per row	Total length in mm.	Sex	Host	Locality	Remarks
—	—	approx.	♀	<i>Rana t. temporaria</i>	Norwich, Norfolk	Specimen lost before detailed examination. Collected Dec. 1948
12	6	5	♀	"	"	Collected Dec. 1948
14	6	5	(gravid)	"	"	Collected Oct. 1948
13	6	4.5	♂	<i>Bufo b. bufo</i>	Amersham, Bucks	Toads collected by Lancelot Hogben, Oct. 1921.
14	6	4.5	♂	"	"	
14	5	2.5	♂	"	"	
14	5	5	♀	"	"	
14	5	3	(gravid)	"	"	
14	5	3	(gravid)	"	"	
14	5	2.5	♂	"	"	Specimens of <i>A. ranæ</i> prepared by H. R. Hewer when a student
12	5	4	♂	<i>Rana t. temporaria</i>	Newdigate, Surrey	
						Collected Oct. 1930

A. ranæ were found, although many contained numerous other helminth parasites.

All the specimens recorded above are comparatively short. The samples from *R. temporaria* are too small to be significant. Those recorded from *B. bufo* were not the only specimens found on that occasion. Two or three other members of the class each found a similar number of specimens, all of which were of about the same size. It is possible that *A. ranæ* does not reach the same large size in *B. bufo* as it does in *R. temporaria*.

It appears probable that the distribution of *A. ranæ* in Britain is local; but that where it is found it may be abundant. Obviously, Dales is correct in suggesting that its apparent rarity is due to lack of recorded observations.

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¹Dales, R. P., *Nature*, **162**, 1001 (1948).

²Eales, N. B., *Nature*, **163**, 166 (1948)

Nomenclature of Polymyxin Antibiotics

POLYMYXIN is a term introduced by Stansly, Shepherd and White¹ for an antibiotic substance elaborated by *Bacillus polymyxa*.

Brownlee and his colleagues^{2,3} independently reported the discovery, from a different strain of *Bacillus polymyxa*, of an antibiotic designated as 'Aerosporin' which appeared to be similar to 'polymyxin' in its antibacterial spectrum, but to exhibit certain different pharmacological properties². Evidence has recently been obtained^{4,5} which confirms that 'polymyxin' differs from 'Aerosporin' both pharmacologically^{6,7} and chemically^{4,5}. Furthermore, it is now known that different strains of *Bacillus polymyxa* are capable of producing a number of related antibacterial substances which differ chemically^{4,5} and pharmacologically^{6,7} one from the other.

In view of these circumstances, it appeared advisable to unify the nomenclature of this group of antibiotics in order to emphasize the relationship of the members of the group and to avoid the publication of an array of bizarre names which would only confuse it. This end has been achieved by agreement on 'polymyxin' as the generic term for these antibiotics, the individual members being polymyxin A, B, C, D, etc.

At the present time the known polymyxins may be characterized as basic antibacterial polypeptides,

the salts of which are water-soluble, having a unique specificity for the Gram-negative bacteria. The known members have, in common, α,γ -diaminobutyric acid, threonine and a branched C₈-fatty acid as molecular constituents^{4,10}.

Polymyxin A is the name given to 'Aerosporin'²; in addition to L-threonine and L- α,γ -diaminobutyric acid, it contains D-leucine¹⁰. Polymyxin B contains both leucine and phenylalanine as additional constituents, whereas polymyxin C contains only one additional amino-acid, namely, phenylalanine⁸. Polymyxins B, C and E, the product of distinctive strains of *Bacillus polymyxa*, have recently been announced from the Wellcome Research Laboratories^{5,8}. Polymyxin D is the main active component of the material described from the American Cyanamid Company^{1,4,11} and contains D-leucine and D-serine in addition to the common constituents^{4,5}. Polymyxin E contains the same constituents as polymyxin A, but is distinguished from the latter by partition chromatography on paper⁸. The fatty acid of the polymyxins has been described but not fully characterized. It appears to be the same in polymyxins A, B and D^{4,10}.

Attention is directed to the fact that no implication of priority is to be attached to the sequential assignment of letters. Assignment of letters to further antibiotics in the series should be based solely on published data which characterize the antibiotic as a new member of the polymyxin group.

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² Ainsworth, G. C., Brown, A. M., and Brownlee, G., *Nature*, **160**, 263 (1947).

³ Brownlee, G., and Bushby, S. R. M., *Lancet*, (i), 127 (1948).

⁴ Bell, P. H., Bone, J. F., English, J. P., Fellows, C. E., Howard, K. S., Rogers, M. M., Shepherd, R. G., Winterbottom, R., Dormbush, A. C., Kushner, S., and Subbarow, Y., *Annals N.Y. Acad. Sci.* (in the press).

⁵ Jones, T. S. G., *Annals N.Y. Acad. Sci.* (in the press).

⁶ White, H. J., Alverson, C., Baker, M. J., and Jackson, E. R., *Annals N.Y. Acad. Sci.* (in the press).

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⁸ Jones, T. S. G., *Biochem. J. Proc.* (July 24 1948).

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¹⁰ Catch, J. R., Jones, T. S. G., and Wilkinson, S., *Annals N.Y. Acad. Sci.* (in the press).

¹¹ Shepherd, R. G., Stansly, P. G., Winterbottom, R., English, J. P., Fellows, C. E., Ananenko, N. H., and Guillet, G. L., *J. Amer. Chem. Soc.*, **70**, 3771 (1948).