PROPOSAL FOR THE VALIDATION OF THE SPECIES NAME ARIZONA ARIZONAE KAUFFMANN AND EDWARDS

Request for an Opinion

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ABSTRACT. It is proposed that the Judicial Commission of the Nomenclature Committee validate the generic name Arizona Kauffmann and Edwards (1952) and the species name Arizona arizonae Kauffmann and Edwards (1952).

In 1952 Kauffmann and Edwards employed the terms Arizona and Arizona arizonae in Tables 1 and 2 of their paper entitled "Classification and Nomenclature of Enterobacteriaceae." Since that publication appeared, there has been general acceptance of Arizona as the generic name and Arizona arizonae as the species name for the bacteria first described by Caldwell and Everson (1939). However, Kauffmann and Edwards (1952) employed the above-mentioned terms in tables only and stated (p. 5) that "The terms used in the biochemical classification may or may not be valid ones and should be subjected to review by persons familiar with bacterial taxonomy." Hence, the validity of the publication of the term Arizona and the species name Arizona arizonae by Kauffmann and Edwards (1952) is open to question, as pointed out by Professor Buchanan (personal communication, September 1965).

 Nonetheless, there has been a general, tacit acceptance of the above-mentioned terminology, as indicated by a cursory survey of the literature. Kauffmann (1952) used Arizona in the generic sense (p. 485) and employed the species name Arizona arizonae in Table 2 "Genera and Species." In the second edition of his book entitled "Enterobacteriaceae," (1954) Kauffmann stated (p. 14) "By means of biochemical methods the family Enterobacteriaceae can be sub-divided into the following genera: Salmonella, Arizona...." In the
table on page 15, the species *Arizona arizonae* (sic) is listed within the tribe *Salmonelleae*, and on page 147 the genus *Arizona* is defined. Möller (1954) listed the genus *Arizona* (sic) in Table 3 (p. 263) and used *Arizona* in the generic sense elsewhere in the paper (e.g., p. 268). Kauffmann and Möller (1955) employed the generic name *Arizona* in *Arizona delplata* (p. 176) and Kauffmann and Petersen (1956) used the term in the generic sense (p. 484). Lautrop (1956) and Kauffmann (1956) both employed the term *Arizona* in the generic sense (pp. 361 and 86, respectively). Suassuna and Suassuna (1959) used *Arizona* in the generic sense (p. 67) and Kauffmann (1959) employed *Arizona* as the genus name (p. 3). Steele (1961) and LeMinor and Piechaud (1963) also employed this term in the generic sense. Ewing (1963) adopted both the generic term *Arizona* Kauffmann and Edwards and the species name *Arizona arizonae* Kauffmann and Edwards. Further, Riffat et al. (1964) used the term *Arizona* in the generic sense, the species name *Arizona arizonae* Kauffmann and Edwards was recognized in the Catalogue of Cultures, 7th ed. of the American Type Culture Collection and Edwards et al. (1965) used the term as the name of the genus *Arizona*. Ross et al. (in press) and Ewing and Fife (1966) employed the generic name *Arizona*, the specific epithet *arizonae*, and the species name *Arizona arizonae*. The specific epithet *arizonae* has been used frequently by writers other than those cited above, e.g., Cowan (1956) *S. arizonae*; Bergey's Manual 7th ed. (1957) *Paracolobacterium arizonae*; Skerman (1959) *P. arizonae*; Cowan and Steele (1961) *S. arizonae*; Kauffmann and Rohde (1962) *S. arizonae* for their subgenus III of *Salmonella*; and by Ewing and Fife (1966).

The ad hoc Commission of the International Enterobacteriaceae Subcommittee chose NCTC culture 8297 *Arizona arizonae* as the neotype strain, typical of the species (Appendix 3, Report, International Enterobacteriaceae Subcommittee, 1958). The Editorial Board (1959) in their Preliminary Statement regarding the recommendations of the above-mentioned ad hoc Commission gave an incorrect citation and listed NCTC culture 8297 (ATCC 13314) as follows:

*Arizona arizonae* (Kauffmann) ?

Type species of genus *Arizona* ?

However, in Opinion 26 (1963) the Editorial Board unanimously approved (sic) certain cultures as neotype strains, among which was NCTC culture 8297, cited as follows:

Finally, the Subcommittee on Enterobacteriaceae of the Committee on Taxonomy of the American Society of Microbiology voted at their meeting in 1963 (see Report, 1964) in favor of the nomenclatural system proposed by Ewing (1963) and recommended its adoption by the Society and its use in the next edition of Bergey's Manual.

Thus it is apparent that the generic term Arizona, the specific epithet arizonae, and the species name Arizona arizonae are accepted and are being widely used by many authors and that the nomenclature regarding these particular names should be validated. It should be mentioned that there are no homonyms nor senior synonyms extant, and it is emphasized that failure to validate these names will lead to nomenclatural confusion and error.

Therefore it is proposed that the Judicial Commission of the Nomenclature Committee validate the generic name Arizona Kauffmann and Edwards (1952) and the species name Arizona arizonae Kauffmann and Edwards (1952). It is suggested that if ancillary data are required or if emendation is deemed necessary, the publication of Ewing and Fife (1966) be employed for these purposes.

References


