

Rejection of *Chloropseudomonas ethylica* as a Nomina Rejicienda

Request for an Opinion

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The name *Chloropseudomonas* and the combination *Chloropseudomonas ethylica* should be declared nomina rejicienda since descriptions of these organisms were based upon mixed cultures.

Chloropseudomonas was originally proposed as the generic name for a motile, green photosynthetic bacillus (1). Cultures of such an organism were described (10-12), and the generic name *Chloropseudomonas* was validated, with *C. ethylica* as the type species, for this microbe (6, 8). However, ambiguities inherent in published descriptions of cultures of *C. ethylica* were noted (5, 12). Originally, *C. ethylica* strains 2K and 3S were nonmotile rods (11). Later the organism was described as being a motile chloropseudomonad (10, 12). Although this inconsistency seemed to be resolved in favor of motility, one major anomaly remained. Cell suspensions were described as being green, but individual cells were colorless (5, 9).

The above-mentioned discrepancies and other observed anomalies led to further examination of subcultures of *C. ethylica* strain 2K. All cultures examined were mixtures of at least two microbes, *Chlorobium limicola*, a nonmotile, photosynthetic rod, and a heterotrophic, non-photosynthetic, flagellated rod (2). The flagellated rod has since been examined and described as a new genus and species, *Desulfuromonas acetoxidans* (7). *C. limicola* and *D. acetoxidans* formed a vigorously growing ecosystem in Larsen medium (2, 4, 7). It was not possible to isolate a motile *Chlorobiaceae* from any alleged culture of *Chloropseudomonas* (2). Also, no isolates asserted to be chloropseudomonads have been described since publication of data by Gray et al. (2) concerning cultures alleged to be *C. ethylica*. Since pure cultures of an organism legitimately described as a chloropseudomonad are not available, the names *Chloropseudomonas* and *C. ethylica* should be declared nomina rejicienda on the grounds of nomen confusum (3).

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