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FLAGELLATION IN SIX SPECIES
OF *SPIRILLUM* - A CORRECTION¹

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Williams and Rittenberg (1957) described six species of the genus *Spirillum* Ehrenberg as having a single flagellum at each pole in flagellar-stain preparations. Five of the species—*Spirillum lunatum*, *S. curvatum*, *S. atlanticum*, *S. beijerinckii* and *S. anulus*—were new species; the sixth species was the well-known *S. volutans*. In the discussion of flagellation in species of *Spirillum* Williams and Rittenberg mention the fact that when Leifson's (1951) method of flagellar staining was used that the so-called 'single flagellated' species often showed multiple flagella. Inasmuch as variable results were obtained by routine flagellar stain methods, these authors recommended a survey of flagellation in species of *Spirillum* by means of the electron microscope to resolve this difficulty.

Such electron microscope photographs have been made and it was found that all six species, mentioned above, have multiple flagella. In some instances, even in electron microscope photographs, the flagella are tightly agglutinated to each other, and in flagellar-stain preparations would probably appear as a single flagellum. Such a fascicle of flagella is shown in *S. atlanticum* in figure 1. In other preparations, the flagella are separated as is shown in figure 2 of *S. volutans*.

Due to the fact that the six species of *Spirillum*, described by Williams and Rittenberg (1957) as having a single

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Figure 1. Electron microscope photograph of *S. atlanticum* showing multiple flagella which are agglutinated together. Magnification 48,000 X.

Figure 2. Electron microscope photograph of *S. volutans* showing multiple flagella. Magnification 33,500 X.

flagellum at each pole, have been shown to possess multiple flagella, the description of these species should be emended to read: "motile by tufts of bipolar flagella".

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