

1.1.2 Flow Chart for the Presumptive Identification of Selected Bacteria from Fishes*

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This revised key for the identification of bacterial pathogens of fish was developed by Dr. Emmett Shotts in 2001[§] and was designed to replace and simplify the key found in the 1994 edition of the Blue Book. This new key provides a broad perspective of strategies useful for the biochemical identification of bacterial fish pathogens and it will be helpful in both diagnostic work and in teaching. Users of these new tables must keep in mind that this is a presumptive key and thus it may lead to an incorrect identification of bacterial isolates having atypical biochemical characteristics or of species not included in this key. It is also important to note that some bacteria require special growth media or conditions for growth and that the initial isolations must be made using appropriate substrates and conditions. Diagnosticians should use this key as a helpful guide, but final diagnostic decisions should be based on more information provided in other specific bacteriology subchapters of this chapter or in Section 1, 1.1 General Procedures for Bacteriology.

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§2014 update of Figure 6 by Ben LaFrentz

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Figure 1: Gram Stain

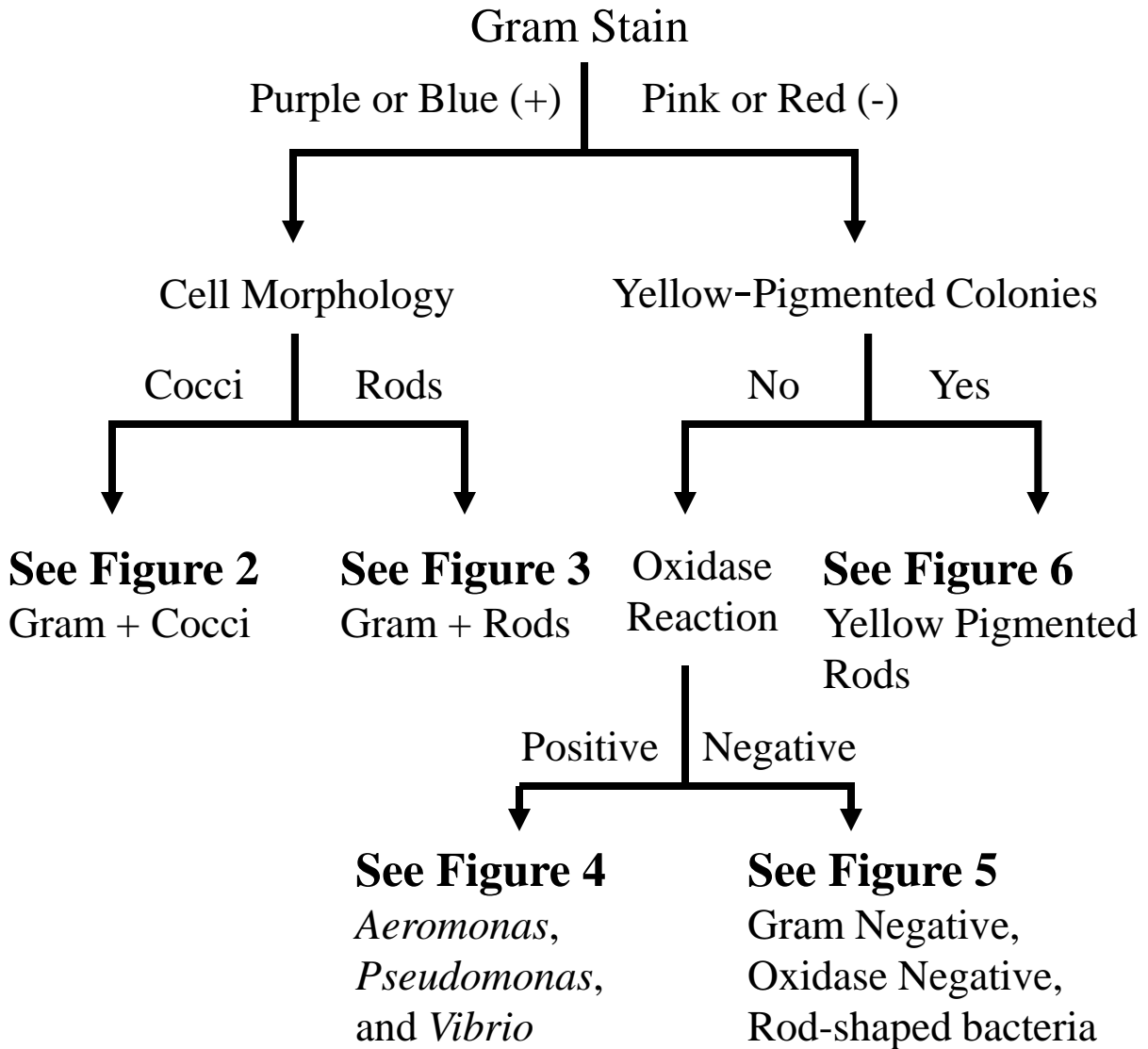
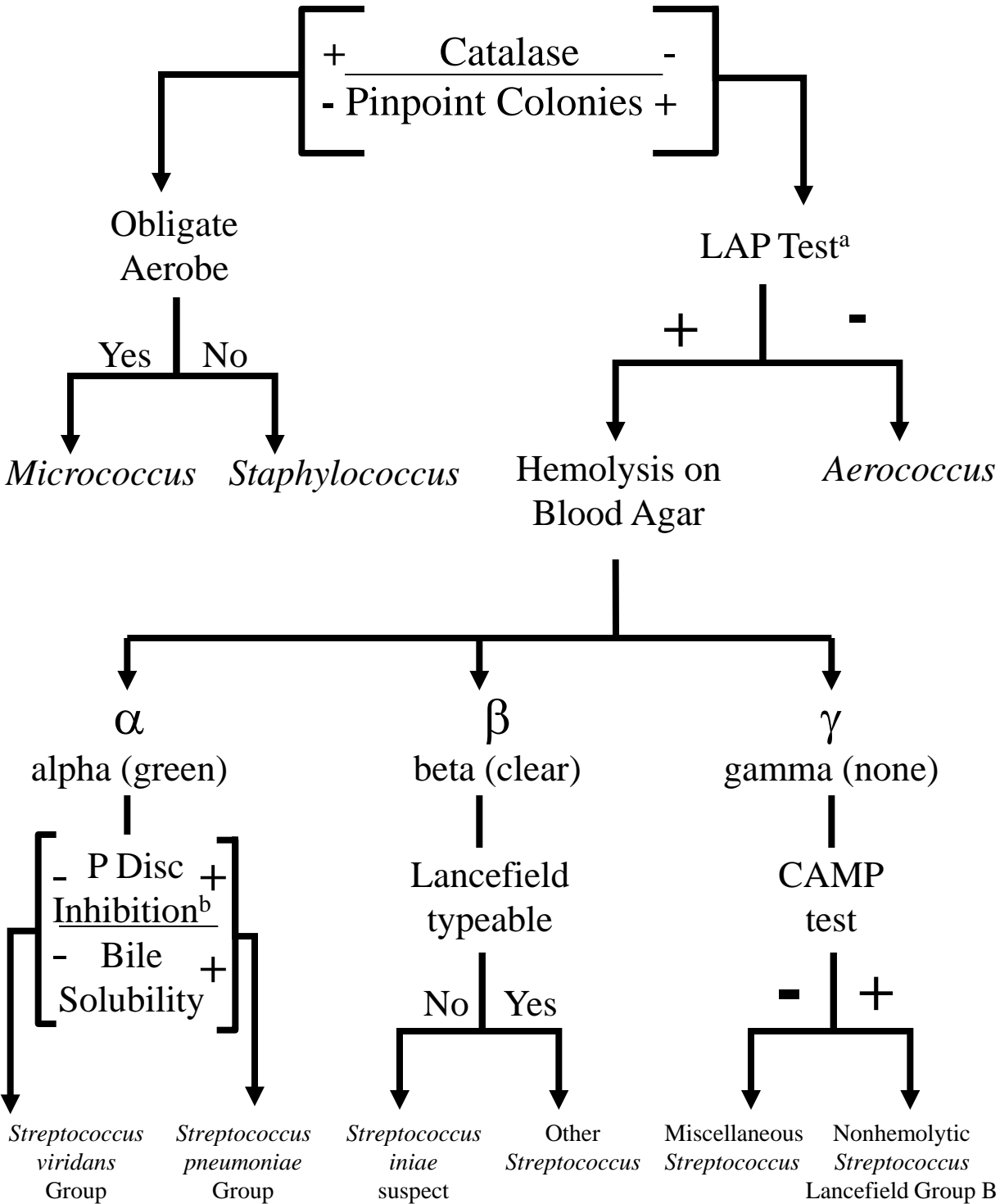


Figure 2: Gram Positive Cocci



a = leucine aminopeptidase test

b = ethyl hydrocuprein hydrochloride (5 µg) disc

Figure 3: Gram Positive Rods

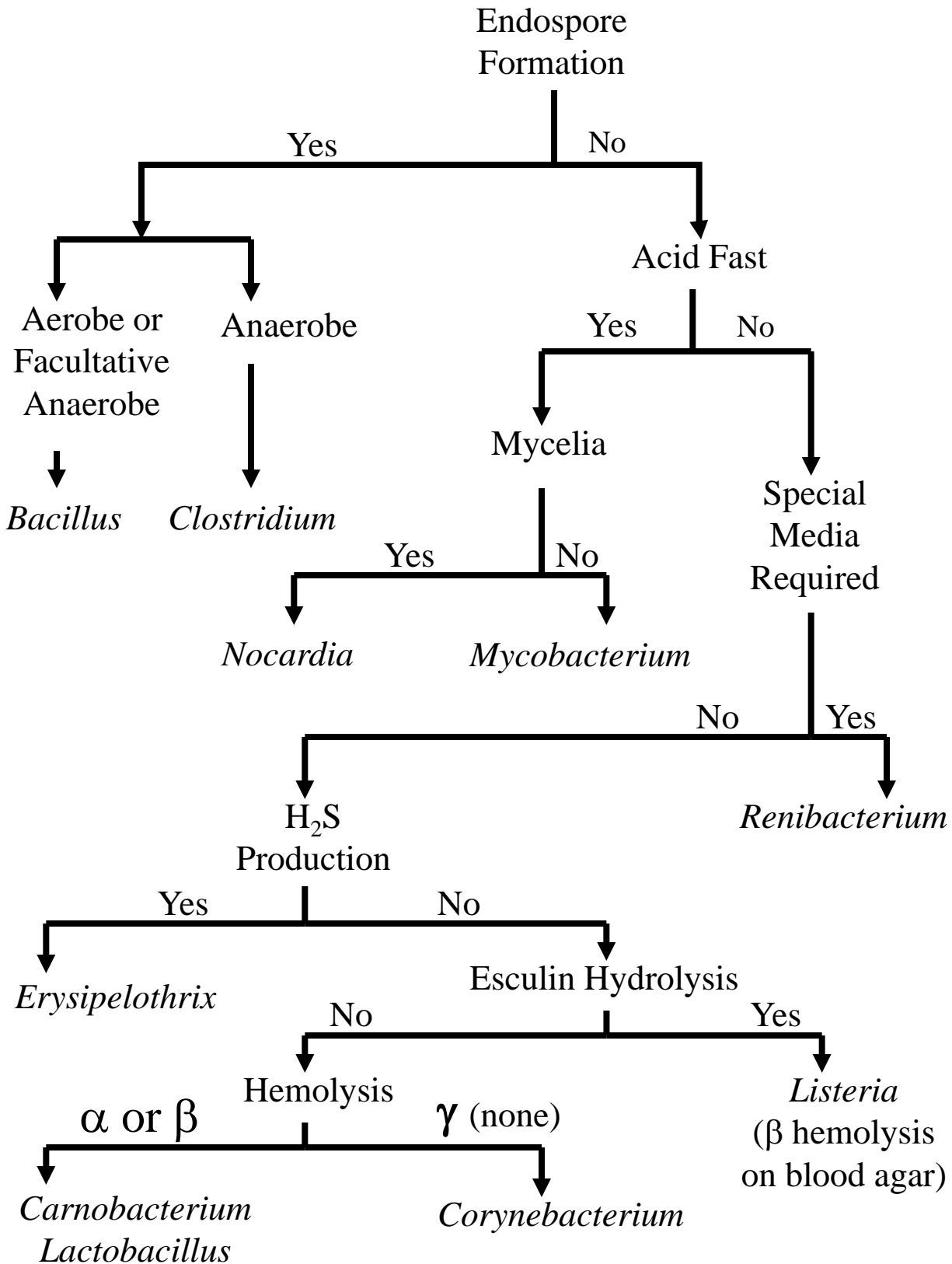


Figure 4: *Aeromonas*, *Pseudomonas*, and *Vibrio*

Glucose Utilization

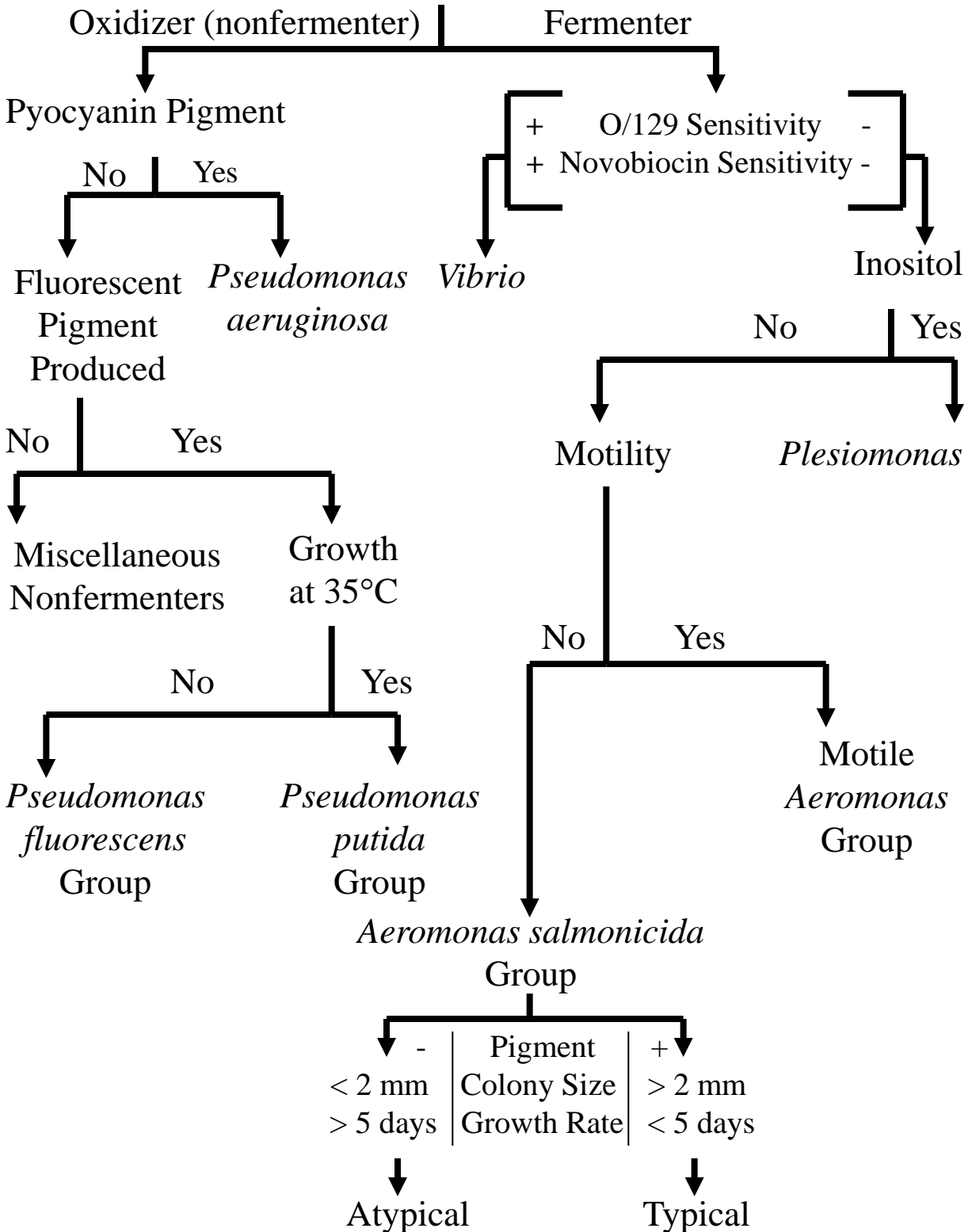


Figure 5: Gram Negative, Oxidase Negative, Rod-shaped bacteria

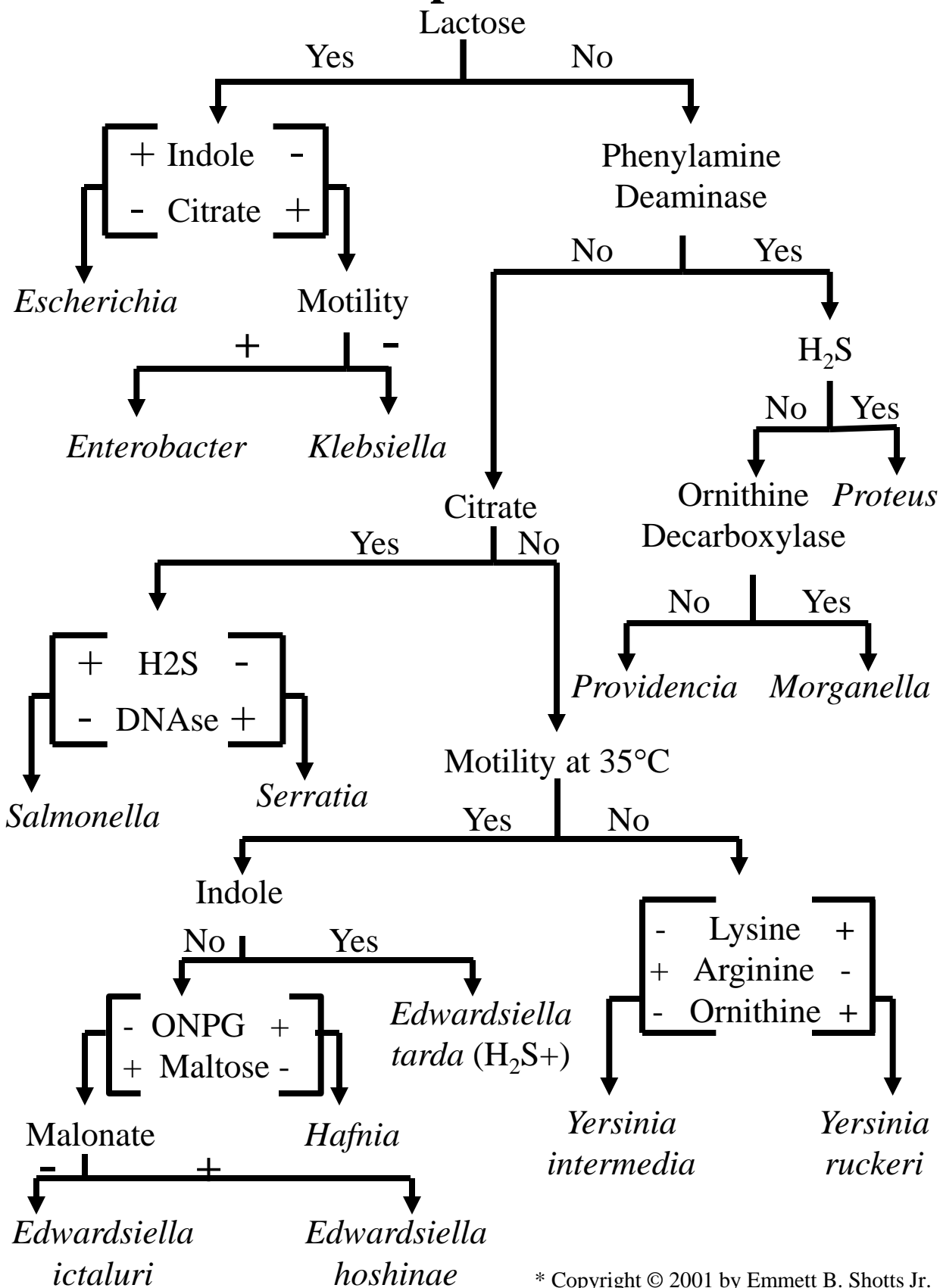
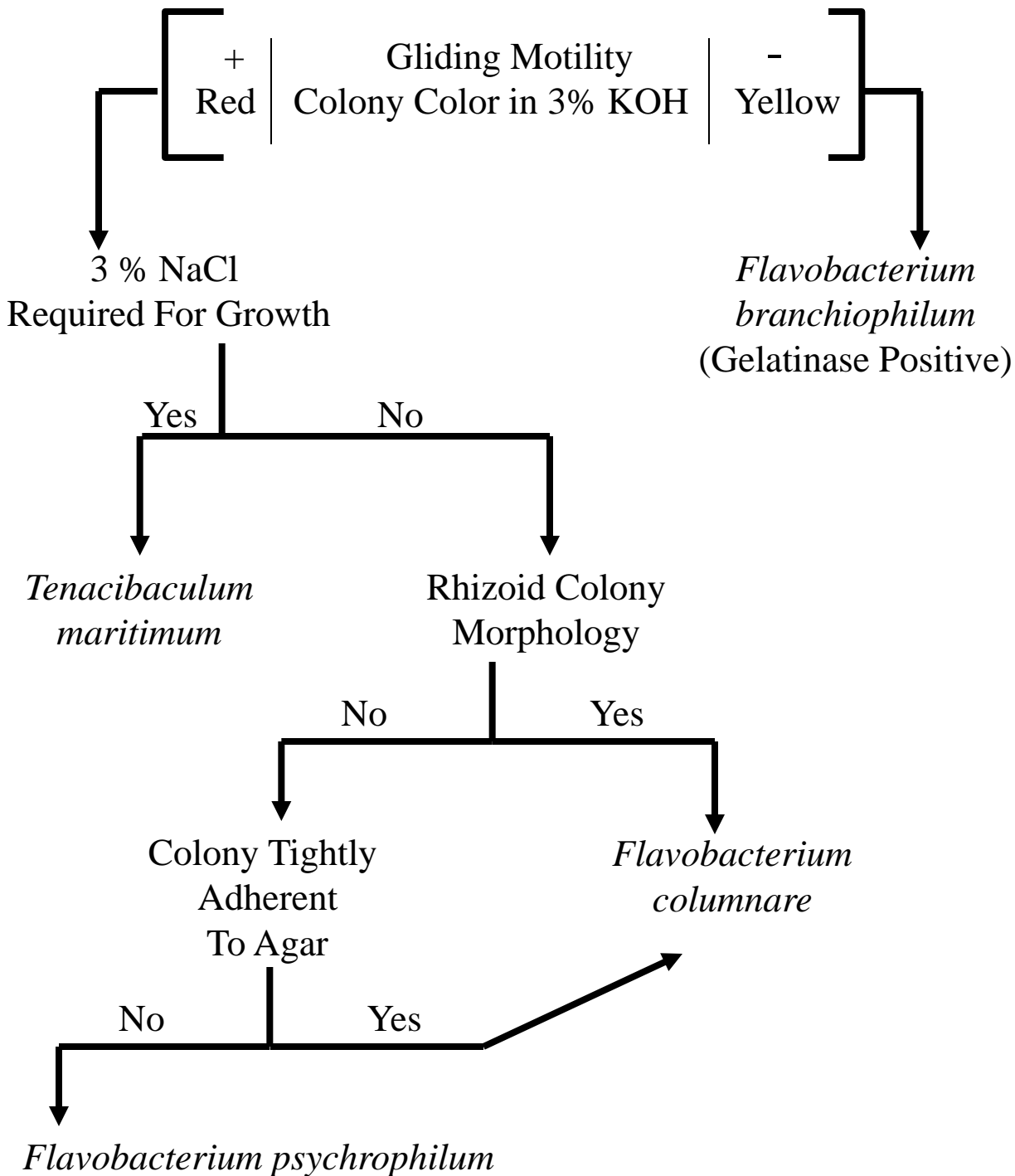


Figure 6: Yellow-Pigmented Rods¹



¹ New *Flavobacterium* spp. and related yellow-pigmented bacteria have been described complicating this flow chart. Definitive identification using molecular techniques may be necessary.