

tick is poorly understood, more data are clearly needed to gain an understanding of its means of transmission. The accumulation of such data may help elucidate the problem of the exchange, intermixing, and migration of the Russian and North American bird populations.—CLAYTON M. WHITE, *Department of Zoology, University of Utah, Salt Lake City, Utah*, and HEINRICH K. SPRINGER, *Box 375, College, Alaska*.

**The use of the terms “juvenal” and “juvenile.”**—Uncertainty and confusion exist as to the use of these terms in regard to birds and their plumages. In larger dictionaries both words are given synonymous meanings of young or youthful (adjective) and a youth (noun); but “juvenal” is now very rare or obsolete in its original general sense and has become almost exclusively a technical term designating a specific plumage stage in birds. The term “juvenal plumage,” meaning the first covering of true feathers following the neossopile or downy stage, seems to have originated with Jonathan Dwight (see *Ann. New York Acad. Sci.*, 13: 99, 106, 1900). Dwight later explained his selection of “juvenal,” rather than the more familiar “juvenile,” because the latter word “has a less exact meaning” (*Auk*, 19: 251, 1902), being commonly used to indicate immaturity in general. Dwight’s term “juvenal plumage” has been adopted almost universally by American ornithologists, including those who, like Humphrey and Parkes (*Auk*, 76: 15, 1959), favor abandoning Dwight’s plumage nomenclature in other respects. In Great Britain “juvenile plumage” is employed in the same sense (H. F. Witherby *et al.*, *The handbook of British birds*, vol. 1, p. xxiii; London, Witherby, 1941.). However much current ornithological literature, both in the United States and abroad, uses “juvenile” with the general meaning of “immature,” that is, for any stage prior to the definitive adult (J. Van Tyne and A. J. Berger, *Fundamentals of ornithology*, p. 572; New York, Wiley and Sons, 1959. M. E. Rawles in A. J. Marshall *et al.*, *Biology and comparative physiology of birds*, vol. 1, New York and London, Academic Press, 1960; see pp. 198–9.). Sometimes—and this is particularly true of specimen labels—“juvenile” or “juv.” indicates only the younger stages of immaturity, but without restriction to the first generation of plumaceous feathers. Some American ornithologists insist, nevertheless, on a fine distinction, which seems to me both unnecessary and productive of confusion; they use “juvenal” as an adjective for the first feathered plumage, but adopt “a juvenile” as the noun for a bird in juvenal dress. Others suggest that “juvenal-plumaged bird” be employed to avoid ambiguity. It seems to me shorter and simpler (and equally unambiguous) to say “a juvenal” for an individual in juvenal plumage. The only objection advanced is that “juvenal” is adjectival in form and origin; but this applies equally to “juvenile.” As a matter of English usage and grammar both words are convertible into nouns. Such locutions as “an immature” or “a downy” are strictly analogous.

In the interest of precision and brevity, I recommend that those who employ “juvenal” to indicate the plumage should also use the term “a juvenal” for a bird in that plumage. Because of its ambiguity, “juvenile” should be avoided in technical studies of plumage or where a specific age stage is intended.\*—E. EISENMANN, *American Museum of Natural History, New York 24, New York*.

\* Without reference to the finer distinctions relating to noun vs. adjectival use, the editor is one who considers “juvenal” a definite statement of stage (i.e., relating to a bird in first plumage) and “juvenile” a general indication of comparative youthfulness. These are the meanings that these terms (hopefully) carry in *The Auk*.—Ed.