

This Week's Citation Classic[®]

Vermeer K. The breeding ecology of the glaucous-winged gull (*Larus glaucescens*) on Mandarte Island, B. C. (Whole issue.) *Occas. Pap.—Br. Columbia Prov. Mus.* (13), 1963. 104 p.
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The breeding cycle of glaucous-winged gulls was investigated for a total of eight months in the summers of 1961 and 1962 on Mandarte Island, a small rocky island in the southern Strait of Georgia, British Columbia. The results of the major experiment of that study challenged the interpretation that the upper limits of the clutch of three eggs in gulls was set by the food requirements of the young. [The *SC7*[®] indicates that this paper has been cited in over 100 publications, making it one of the most-cited papers from that series.]

Nesting Biology of Glaucous-Winged Gulls

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My interest in studying gulls began on a weekend in May 1960, when as a student assistant involved with fish orientation studies at the Pacific Biological Station in Nanaimo, I accompanied my supervisor on a field trip to photograph glaucous-winged gulls on a small rocky islet. This was the first time I had seen nesting gulls, and I became so intrigued with their behavior that, from that moment on, I made up my mind to study gulls.

My previous plans to research some aspect of fish ecology for a master's degree evaporated and consequently so did my prospects

of becoming employed in the field of fisheries. During the next two years, I conducted field investigations on Mandarte Island for a master of science degree at the University of British Columbia. On one occasion my supervisor, Dr. Miklos Udvardy, brought Dr. David Lack, perhaps the most prominent avian ecologist living at that time, to the island. We had an enjoyable time discussing world events and birds, but only once was the subject of my study briefly brought up. I mentioned that I had added gull chicks to existing nests to create supernormal broods of four, five, and six chicks (the normal being three chicks or less) to determine if parent birds could raise extra-large broods. Lack predicted the gulls would be unable to do so. I replied that if that were indeed true, it would support his hypothesis that the clutch size of each species of bird had been adapted by natural selection to correspond to the largest number of young for which the parents can, on average, provide enough food. At the end of that season, I found (to my surprise as well) that parent birds were not only able to raise four, but also five and six chicks to the age of flight. Lack was very concerned about those results. Lack's clutch size hypothesis has triumphed so far, in spite of the outcome of many experimental studies that did not support the hypothesis. However, the last word on this theory may not have been said yet.¹

I do not know exactly why my first paper has been cited so frequently. Perhaps it was the challenge to Lack's hypothesis and/or the detailed documentation of other findings, some of which did not support statements made by other noted scientists in the field such as Fraser Darling or Nico Tinbergen. Dr. Tinbergen, a Nobel Prize recipient, invited me to study under him in Oxford shortly after the completion of my study, an offer that I declined for pragmatic reasons. Whatever the reason(s) for this paper's success, I enjoyed my study immensely. Since then, I have been involved with many other studies of water birds and my enthusiasm for research remains unabated. But I will never forget the first thrill of biological discovery on Mandarte Island.

1. Ydenberg R C & Bertram D F. Lack's clutch size hypothesis and brood enlargement studies on colonial birds. *Colon. Waterbird.* 12:134-7, 1989.