

DIETS OF GLAUCOUS-WINGED GULLS: A COMPARISON OF METHODS FOR COLLECTING AND ANALYZING DATA

DAVID B. IRONS¹

ABSTRACT.—Scientists collect data on the diets of gulls for many purposes. Depending on the objectives and the available resources, one or more of four main methods of determining diets may be best. All four have advantages and biases. My results showed that crop and/or gizzard contents provide some intact organisms, but crop contents are sometimes lost by regurgitation. Observations supply data for specific times and locations, but some prey cannot be identified. Regurgitated pellets furnish sizes of organisms and a large sample size, but are biased against soft-bodied prey. Food fed to chicks can be obtained easily but differs from adults' diets.

I analysed data from my studies using six methods: number, dry weight, volume, frequency of occurrence, an index of relative importance, and caloric value. All methods showed similar results but, depending on the type of prey eaten, results could vary greatly. The manner of collecting data, the study objectives, and the prey types should determine what method of analysis is used.

¹ United States Fish and Wildlife Service, 1011 E. Tudor Road, Anchorage, Alaska 99503.