

COMMENTARY

Colonies, Sites, and Surveys: the Terminology of Colonial Waterbird Studies

JAMES A. KUSHLAN

Department of Biological Sciences, East Texas State University, Commerce, Texas 75428 USA

Abstract.—Confusion has arisen by the varying and imprecise use of the terms “survey,” “census,” “colony,” and “colony site.” The term “survey” should be restricted to locating colony sites; whereas “census” is the enumeration of the inhabitants of such a colony site. The term “colony” should not be used to refer to the site of colonial nesting but should be restricted to the avian assemblage itself. Failure to distinguish a colony of birds from the site they inhabit may lead to inexactitude and inhibit appropriate evaluation of regional populations.

Key words.—Census, colony, colonial water birds, conservation, survey.

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The study of colonial waterbirds as a self-conscious subdiscipline of ornithology is of rather recent vintage. In all developing fields, terminology is needed and is usually appropriated from that readily available in parent or sibling fields. At times though, it may be useful to pause and consider whether the vocabulary in use might benefit from some tidying up. Such pauses should not be used for nitpicking, but rather to achieve a precision that not only aids the difficult process of communication but also may help focus research questions and their answers. To this end I offer for consideration two pairs of terms: survey and census, colony and colony site.

The terms “survey” and “census” are often called upon to describe activities in and about water bird colonies. They are not infrequently used interchangeably, sometimes to avoid word repetition in the same sentence. A tendency does exist for “survey” to be used to describe observations made from the air and for “census” to be used for ground counts. Both often refer to counting, but “census” tends to carry an inference of being more exact than a “survey”. I have seen serious criticism leveled at particular uses of “census” for counts that the critic deemed were too poor to qualify. Clearly the choice of terms can get in the way of a more fundamental concern: that of the reliability of the counting methods being employed. The varying use of these potentially useful terms encourages confusion as to what sorts of activities are being reported and their appropriateness to the questions being asked.

Both these terms can be useful if we allow them to assume specific meanings. A decade ago Paul Buckley and Francine Buckley provided suitable definitions, which I commend to colonial waterbird workers: “Surveying is the process of locating active colonies; censusing records the species and numbers of colony inhabitants” (Buckley, P. A. and F. G. Buckley 1976, Guidelines for protection and management of colonially nesting waterbirds, Natl. Park Service Dept., Boston, Massachusetts: National Park Service). There is no inference, in these definitions, as to their relative accuracy. Both surveys and censuses involve associated errors, and it is to these errors that the investigator must speak in defending the appropriateness of the method chosen and the accuracy of the resulting data.

A careful consideration of these definitions leads to the realization that censuses and surveys are measuring quite different things. A survey involves the “colony site”; a census involves the inhabitants, that is the “colony” itself. These are exceptionally useful distinctions. The “colony site” is the place where colonial nesting occurs. The “colony” is the collection of birds using such a site. An analagous distinction may be drawn between “roost site” and “roost.”

Much inexactitude has resulted from using the term “colony” for both the site and the birds, often without distinction. One might inquire as to whether a colony exists if no birds are present. Should any previous occupancy count? I have seen many a census that showed zero birds in a “colony.” But where might one draw the

line: at now unoccupied sites used last summer, within ten years, within a century? In southern Florida we know of sites that have not been used for decades; are these still colonies? It is far clearer to use the term "colony site" for the location, which exists irrespective of the present occupancy of nesting birds, and to restrict the use of the term "colony" to the assemblage of birds.

The unrestricted use of the term "colony" has had a more insidious effect, one that has impaired thoughtful considerations of colonial water bird conservation: an excessive concern for named "colonies." For much of this century, conservation, management, and research has focused on certain colony locations rather than on colonial bird populations of a region. It is clear that colony sites are more or less ephemeral and that individual birds may shift from one location to another. Only in places where suitable sites are restricted is long term occupancy expected and even there parts of the population may be vagile. Concern for the "population" at a colony site may have little pertinence to the larger biological population.

The tendency to give names to "colonies" especially inhibits consideration of broader concerns. We welcome the familiarity of being able to refer to a site by a pet name (in southern Florida some have several names), but a number or co-ordinate would be just as accurate without attendant personification. I have repeatedly seen managers, politicians, and reporters in a state of near apoplexy needing to know the status of a favorite colony site, while ignoring the more biologically meaningful question of the status of the larger regional population. I do not mean to imply that protection of colony sites is inappropriate; it is essential. But concern for specific colony sites should not detract from consideration of the biological population some of which may periodically assemble therein.

Distinguishing between "colony sites" and "colonies", "surveys" and "censuses" may help clarify communication, as well as our thinking as to what we are studying, how, and even perhaps why.