

COMMENTARY

ANALYSIS ERROR IN BROOD PARASITISM PAPER¹

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There is a statistical error in a recent paper that the senior author published regarding waterfowl brood parasitism (Lokemoen 1991). In Lokemoen (1991, Table 4) a statistical difference was reported for nest success between parasitized and unparasitized Gadwall (*Anas strepera*), Blue-winged Teal (*Anas discors*), and Northern Shoveler (*Anas clypeata*) nests. However, in the statistics used by Lokemoen (1991, Table 4) the variance of the difference rather than standard error of the difference was inadvertently used to calculate z-scores for those species, which led to erroneously small p-values. When the z-scores are correctly cal-

culated, we find no significant differences in nest success between parasitized and unparasitized nests for any of the species ($P > 0.05$, Table 1). Except for Weller (1959), other authors have also failed to find a difference in nest success between parasitized and unparasitized nests.

The standard errors given in Lokemoen (1991, Table 4) were misleading as they were standard errors for the daily survival rate (DSR) estimates multiplied times 100, and not standard errors of the nest success estimates. That situation has been clarified in Table 1.

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LITERATURE CITED

- LOKEMOEN, J. T. 1991. Brood parasitism among waterfowl nesting on islands and peninsulas in North Dakota. *Condor* 93:340-345.
 WELLER, M. W. 1959. Parasitic egg laying in the Red-head (*Aythya americana*) and other North American Anatidae. *Ecol. Monogr.* 29:333-365.

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TABLE 1. The effect of interspecific brood parasitism on nest success of the host, on islands in central North Dakota, 1985 and 1986.

Host	Unparasitized nests				Parasitized nests				P
	Exp days	DSR	SE ¹	Nest suc (%)	Exp days	DSR	SE ¹	Nest suc (%)	
Mall	148	0.993	0.67	79	0	—	—	—	—
Gad	706	0.994	0.28	82	250	0.988	0.68	66	0.20
BWT	59	0.983	1.68	57	84	0.976	1.67	45	0.38
N SH	33	1.000	0	100	37	0.946	3.72	16	0.07
N PT	29	1.000	0	100	75	1.000	0	100	—
LS	360	0.992	0.47	75	375	0.992	0.46	76	0.52

¹ Standard error of daily survival rate multiplied by 100.