

LITERATURE REPORTING RESEARCH DONE ON PROTECTION ISLAND AND THE SAN JUAN ISLANDS

Includes published papers and theses reporting unpublished research

- Amlaner, C. J. Aggressive communication by *Larus glaucescens*. Part VI: Interactions of territory residents with a remotely controlled, locomotory model. *Behaviour* 66:223-251.
- Amlaner, C. J., J. L. Hayward, E. R. Schwab, and J. F. Stout. 1977. Increases in a population of nesting glaucous-winged gulls disturbed by humans. *Murrelet* 58: 18-20.
- Ashton, N. 1994. Size and behavior tempo among five species of gulls. M.S. thesis, Andrews University, Berrien Springs, Michigan.
- Ball, N. J., C. J. Amlaner, J. P. Shaffery, and M. R. Opp. 1988. Asynchronous eye-closure and unihemispheric quiet sleep of birds. *Sleep* (Stuttgart) 1986:151-153.
- Banks, J. C. 1981. A comparative breeding study of the pigeon guillemot (*Cephus columba*) on Kainem Point, Protection Island, Washington. M.S. thesis, Andrews University, Berrien Springs, Michigan.
- Bell, D. A. 1996. Genetic differentiation, geographic variation and hybridization in gulls of the *Larus glaucescens-occidentalis* complex. *Condor* 98:527-546.
- Bell, D. A. 1997. Hybridization and reproductive performance in gulls of the *Larus glaucescens-occidentalis* complex. *Condor* 99:585-594.
- Clayburn, J. 1996. Taphonomic effects of pH and temperature on glaucous-winged gull (*Larus glaucescens*) eggshell. M.S thesis, Andrews University, Berrien Springs, Michigan.
- Clayburn, J. K., D. L. Smith, and J. L. Hayward. 2004. Taphonomic effects of pH and temperature on extant avian dinosaur eggshell. *Palaios* 19:170-177.
- Colburn, J. 2004. Behavior of juvenile glaucous-winged gulls (*Larus glaucescens*) related to brood size and period of play. M.S. thesis, Walla Walla College, College Place, Washington.
- Cowles, D. L., and J. L. Hayward. 2008. Historical changes in the physical and vegetational characteristics of Protection Island, Washington. *Northwest Science* 82:174-184.

- Damania, S., K.W. Phillips, J.L. Hayward, and S.M. Henson. Habitat patch occupancy dynamics in glaucous-winged gulls (*Larus glaucescens*) II: A continuous-time model. *Natural Resource Modeling* 18:441-468.
- Durr, D. 1993. Parent-young communication and recognition in the glaucous-winged gull (*Larus glaucescens*). M.S. thesis, Walla Walla College, College Place, Washington.
- Edwards, H. 2001. Aspects of juvenile behavior in the glaucous-winged gull (*Larus glaucescens*). M.S. thesis, Walla Walla College, College Place, Washington.
- Einarsen, A. S. 1945. Some factors affecting ring-necked pheasant population density. *Murrelet* 16:2-9.
- Forsyth, D. 1994. A comparison of the behavior of resident and intruder glaucous-winged gulls (*Larus glaucescens*) in a colony during territory formation. M.S. thesis, Walla Walla College, College Place, Washington.
- Galusha, J. G., and R. L. Carter. 1987. Do adult gulls recognize their own young: An experimental test. *Studies in Avian Biology* 10:75-79.
- Galusha, J. G., and G. English. 1999. A Study of the social and reproductive habits of Indian Peahens (*Pavo cristatus*) living on Protection Island, Jefferson County, Washington USA. *Pavo* 37:19-32.
- Galusha, J.G. and J. L. Hayward. 2002. Bald eagle activity at a gull colony and seal rookery on Protection Island. *Northwestern Naturalist* 83:23-25.
- Galusha, J. G., and L. Hill. 1996. A study of the behavior of Indian peacocks breeding on Protection Island, Jefferson County, Washington. *Pavo* 34:23-31.
- Galusha, J. G., and J. M. Redd. 1992. Population structure and daytime behavior of Indian peafowl (*Pavo cristatus*) on Protection Island, Jefferson County, Washington. *Pavo* 30:75-86.
- Galusha, J. G., B. Vorvick, M. R. Opp, and P. T. Vorvick. 1987. Nesting season censuses of seabirds on Protection Island, Washington. *Murrelet* 68:103-107.
- Galusha, J. G., and J. F. Stout. 1977. Aggressive communication by *Larus glaucescens*. Part IV. Experiments on visual communication. *Behaviour* 62:222-235.
- Gillett, W. H., J. L. Hayward and J. F. Stout. 1975. Effects of human activity on egg and chick mortality in a glaucous-winged gull colony. *Condor* 77:492-495.

- Giver, K. J. 1996. Pellet content analysis of egg specialist and non-egg specialist glaucous-winged gulls, *Larus glaucescens*. Undergraduate honors thesis, Andrews University, Berrien Springs, Michigan.
- Hayward, J. L. 2003. Sexual aggression by a male northern elephant seal on harbor seal pups in Washington. *Northwestern Naturalist* 84:148-150.
- Hayward, J. L. 2009. Eagle predation on harbor seal pups. *Northwestern Naturalist* 90:51-53.
- Hayward, J. L., C. J. Amlaner, W. H. Gillett, and J. F. Stout. 1975. Predation on nesting gulls by a river otter in Washington state. *Murrelet* 56:9, 10.
- Hayward, J. L., and J. K. Clayburn. Dead rhinoceros auklet fledglings fly to the sea from their natal burrows? *The Canadian Field-Naturalist* 118:615-617.
- Hayward, J. L., J. G. Galusha, and G. Frias. 1993. Analysis of great-horned owl pellets with rhinoceros auklet remains. *Auk* 110:133-135.
- Hayward, J. L., J. G. Galusha, and S. M. Henson. Foraging-related activity of bald eagles at a Washington seabird colony and seal rookery. *Journal of Raptor Research*, in press.
- Hayward, J. L., W. H. Gillett, C. J. Amlaner, and J. F. Stout. 1977. Predation on gulls by bald eagles in Washington. *Auk* 94:375.
- Hayward, J. L., W. H. Gillett, and J. F. Stout. 1977. Aggressive communication by *Larus glaucescens*. Part V: Orientation and sequences of behavior. *Behaviour* 62:236-276.
- Hayward, J. L., S. M. Henson, J. C. Banks, and S. L. Lyn. 2009. Mathematical modeling of appendicular bone growth in glaucous-winged gulls. *Journal of Morphology* 270:70-82.
- Hayward, J. L., S. M. Henson, C. J. Logan, C. R. Parris, M. W. Meyer, B. Dennis. Harbour seal haul-out dynamics: a deterministic mathematical model. *Journal of Applied Ecology* 42:108-117.
- Hayward, J. L., S. M. Henson, R. Tkachuck, C. Tkachuck, B. G. Payne, and C. K. Boothby. Predicting gull/human conflicts with mathematical models: A tool for management. Submitted to *Natural Resource Management*, February 2009.
- Hayward, J. L., and N. A. Verbeek. 2008. Glaucous-winged gull (*Larus glaucescens*). The Birds of North America Online (A. Poole, Ed). Ithaca, NY: Cornell Laboratory of Ornithology; Retrieved from The Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/059>

- Hayward, J. L., D. K. Zelenitsky, D. L. Smith, D. M. Zaft, and J. K. Clayburn. 2000. Eggshell taphonomy at modern gull colonies and a dinosaur clutch site. *Palaios* 15:343-355.
- Henson, S. M., B. Dennis, J. L. Hayward, J. M. Cushing, and J. G. Galusha. 2007. Predicting the dynamics of animal behaviour in field populations. *Animal Behaviour* 74:103-110.
- Henson, S. M., J. G. Galusha, J. L. Hayward, and J. M. Cushing. 2007. Modeling territory attendance and preening behavior in a seabird colony as functions of environmental conditions. *Journal of Biological Dynamics* 1:95-107.
- Henson, S. M., J. L. Hayward, C. M. Burden, C. J. Logan, and J. G. Galusha. 2004. Predicting dynamics of aggregate loafing behavior in glaucous-winged gulls (*Larus glaucescens*) at a Washington colony. *Auk* 121:380-390.
- Henson, S. M., J. L. Hayward, and S. P. Damania. 2006. Identifying environmental determinants of diurnal distribution in marine birds and mammals. *Bulletin of Mathematical Biology* 68:467-482.
- Hirsch, K. 1981. A report on human activity on Protection Island and recommendations for a management plan for the Zella M. Schultz Seabird Sanctuary. Nongame Program, Washington Department of Game, Olympia. 73 p.
- James-Veich, E., and E. S. Booth. 1954. Behavior and life history of the glaucous-winged gull. *Walla Walla College Publications of the Department of Biological Sciences and the Biological Station*, Number 12.
- Kennett, M. 1987. Experimental adoption in glaucous-winged gulls (*Larus glaucescens*): The effect of distance from the nest. M.S. thesis, Walla Walla College, College Place, Washington.
- Kroll, A. M. 1993. Haul out patterns and behavior of harbor seals, *Phoca vitulina*, during the breeding season at Protection Island, Washington. M. S. thesis, University of Washington, Seattle.
- Larsen, K. H. 1982. Perpetuation of wildlife values of Protection Island, Jefferson County, Washington—Final environmental assessment. U.S. Department of the Interior, Fish and Wildlife Service, Region 1, Portland, OR. 138 p.
- McKee, M. 1987. Adult and chick behavior during artificial adoptions in glaucous-winged gulls (*Larus glaucescens*). M.S. thesis, Walla Walla College, College Place, Washington.

- Moore, A. L., S. P. Damania, J. L. Hayward, and S. M. Henson. 2008. Modeling the daily activities of breeding colonial seabirds: Dynamic occupancy patterns in multiple habitat patches. *Mathematical Biosciences and Engineering* 5:831-842.
- Murdoch, M. 1993. Factors affecting behavioral variation of individual Glaucous-winged Gulls (*Larus glaucescens*) while on territory. M.S. thesis, Loma Linda University, Loma Linda, CA.
- Nestler, J. 1985. Auditory arousal thresholds and sleep in glaucous-winged gulls (*Larus glaucescens*). M.S. thesis, Walla Walla College, College Place, Washington.
- Northam, M. 2001. Analysis of preening behavior in Glaucous-winged Gulls, (*Larus glaucescens*). M.S. thesis, Walla Walla College, College Place, Washington.
- Olango, J. 1998. Time budgets and behavior of glaucous-winged gull (*Larus glaucescens*) chicks in a breeding colony. M.S. thesis, Walla Walla College, College Place, Washington.
- Opp, M. R. 1983. Daily and seasonal activity patterns and spatial utilization of territory by glaucous-winged gulls (*Larus glaucescens*). M.S. thesis, Walla Walla College, College Place, Washington.
- Opp, M. R., N. J. Ball, D. E. Miller, and C. J. Amlaner. 1987. Thermoregulation and sleep effects of thermal-stress on sleep patterns of glaucous-winged gulls (*Larus glaucescens*). *Journal of Thermal Biology* 12:199-202.
- Pearson, D. 1992. Habitat, diurnal, and tidal effects on the behavior of glaucous-winged gulls (*Larus glaucescens*). M.S. thesis, Loma Linda University, Loma Linda, California.
- Phillips, K.W., S. Damania, J.L. Hayward, S.M. Henson, and C.J. Logan. 2005. Habitat patch occupancy dynamics in glaucous-winged gulls (*Larus glaucescens*) I: A discrete-time model. *Natural Resource Modeling* 18:469-498.
- Rasmussen, P.C. 1993. Feather growth patterns and sibling growth rates of nestling Pigeon Guillemots (*Cepphus columba*) on Protection Island, Washington. M.S. thesis, Walla Walla College, College Place, Washington.
- Reid, W. V. 1987a. Constraints on clutch size in the glaucous-winged gull. *Studies in Avian Biology* 10:8-25.
- Reid, W. V. 1987b. The cost of reproduction in the glaucous-winged gull. *Oecologia* 74:458-467.
- Reid, W. V. 1988a. Age-specific patterns of reproduction in the glaucous-winged gull: increased effort with age. *Ecology* 69:1454-1465.

- Reid, W. V. 1988b. Fledging success of experimentally enlarged broods of the glaucous-winged gull. *Wilson Bulletin* 100:476-482.
- Reid, W. V. 1988c. Population dynamics of the glaucous-winged gull. *Journal of Wildlife Management* 52:763-770.
- Richardson, F. 1961. Breeding biology of the rhinoceros auklet on Protection Island, Washington. *Condor* 63:456-473.
- Royer, S. J. 1995. Sequence analysis of the mate-greeting interaction in *Larus glaucescens* and *Larus argentatus*. M.S. thesis, Andrews University, Berrien Springs, Michigan.
- Salzer, D. W., and G. J. Larkin. 1990. Impact of courtship feeding on clutch and 3rd egg size in glaucous-winged gulls. *Animal Behaviour* 39:1149-1162.
- Schmidt, D. 1986. The numbers, distribution and behavior of glaucous-winged gulls (*Larus glaucescens*) at a sanitary landfill. M.S. thesis, Walla Walla College, College Place, Washington.
- Schultz, Z. 1951. Growth in the glaucous-winged gull, Part I. *Murrelet* 32:35-42.
- Schultz, Z. 1952. The growth of the glaucous-winged gull, Part II. *Murrelet* 33:2-8.
- Schwab, E. R., and J. F. Stout. 1991. Aggressive communication by *Larus glaucescens*. VII. The role of the intruder. *Behaviour* 117:161-181.
- Smith, D. L. 1998. Bacterial degradation of avian eggshell: taphonomic and ecological implications. M.S. thesis. Andrews University, Berrien Springs, Michigan.
- Speich, S. M., and T. R. Wahl. 1989. Catalog of Washington seabird colonies. US Fish and Wildlife Service Biological Report 88.
- Stout, J. F.. 1975. Aggressive communication by *Larus glaucescens*. Part III. Description of the displays related to territorial protection. *Behaviour* 55:181-208.
- Stout, J. F., and M. Brass. 1969. Aggressive communication by *Larus glaucescens*. Part II. Visual communication. *Behaviour* 34:42-54.
- Stout, J. F., C. R. Wilcox, and I. E. Creitz. 1969. Aggressive communication by *Larus glaucescens*. Part I. Sound communication. *Behaviour* 34:29-41.
- Thompson, S. P. 1989. Observations of bald eagles eating glaucous-winged gull eggs in western Washington. *Northwestern Naturalist* 70:13-14.

- Thompson, P., D. K. McDermond, U. W. Wilson, and K. Montgomery. 1985. Rhinoceros auklet burrow count on Protection Island, Washington. *Murrelet* 66:62-65.
- Thoresen, A. C., and J. G. Galusha. 1971. A nesting population study of some islands in the Puget Sound area. *Murrelet* 52:20-23.
- Van Scheik, B. 1980. The effects of nest parameters and parental aggressiveness on the survival of glaucous-winged gull chicks (*Larus glaucescens*). M.S. thesis, Walla Walla College, College Place, Washington.
- Wilson, N. J. 2006. What Glaucous-winged Gulls do together: behavior of pairs and neighbors. M.S. thesis, Walla Walla College, College Place, Washington.
- Wilson, U. W. 1977. A study of the biology of the rhinoceros auklet on Protection Island, Washington. M.S. thesis, University of Washington, Seattle. 98 p.
- Wilson, U. W. 1993. Rhinoceros auklet burrow use, breeding success, and chick growth – Gull-free vs gull-occupied habitat. *Journal of Field Ornithology* 64:256-261.
- Wilson, U. W., and D. A. Manuwal. 1986. Breeding biology of the rhinoceros auklet in Washington. *Condor* 88:143-156.