

THE 1985 SEABIRD GROUP CONFERENCE

Population studies and population monitoring were the themes for the 2nd Seabird Group Conference held at Denstone College, Uttoxeter, England, 15-17 February 1985. A total of 128 delegates from 16 countries aided by generous quantities of beer, braved sub-zero temperatures and overcame the inevitable language difficulties to provide for a thought-provoking and ultimately successful conference. John Croxall and the session chairmen ensured that the full programme of 21 papers, two films and a slide show remained on schedule. In addition there was an impressive display of posters and a vast choice of literature at the bookshop.

Guy Ruppell presented a brilliantly photographed film on the flight and feeding of kittiwakes, gannets, guillemots and some Galapagos seabirds. Particularly impressive were sequences of kleptoparasitism by frigatebirds. Whereas specific associations between a species' aerodynamic capabilities and its three-dimensional feeding range were demonstrated, the general trends were less distinct. Michael Swales gave an interesting talk and slide show on Gough Island in the South Atlantic, and appealed for more research efforts on its little-known fauna.

Ken Briggs discussed El Niño-like conditions off the Californian coast which lag the tropical occurrence by three to four months. Its effect can last from six months to two years. Many of the species (e.g. Brown Pelican) move north, but are not replaced by tropical species. Divers in particular are able to remain within their normal range by diving to the thermocline. Phalaropes concentrated around thermal anomalies, as demonstrated by infrared photographs. He postulated a global El Niño which has interesting implications for the Benguela Current region.

Long-term ringing of shags provided the basis for Niel Aebischer's ingenious investigation of past population levels. Jim Fowler explained the use of tape recordings to lure stormpetrels for ringing purposes. Tapes played outside of breeding colonies lured only nonbreeders, or "wanderers". Simple laparoscopic techniques were used to determine that there was no sexual bias in the tapes' attraction. Although good recapture results were reported, the recurrent problem of determining the sampling area prohibited accurate population estimates. Peter Prince was one of the few marine ornithologists present who researches in the southern hemisphere. His fibreglass nests for Greyheaded Albatross yielded continuous recordings of feeding visits by adults. He also demonstrated a penlight battery-sized electronic device which, attached to an albatross leg, could record the time spent on the water throughout the night and day. His results showed that albatrosses spend proportionately more time on the water at night than during the day.

Tony Gaston described Canadian seabird monitoring at sea. In common with monitoring programmes of all the other participants, it was encouraging to note the degree of technique standardization. The Canadian conversion of numbers per kilometer to densities involved species-specific correction factors (e.g. North Atlantic Gannet 1:1,2; Atlantic Puffin

1:1,8) and consideration of "known" population size of nearby colonies. Energy expenditure was estimated using flying : sitting ratios, cost of moult etc.

Many biologists are wont to say that staggered breeding cycles are the result of interspecific competition. Tim Birkhead stressed that for this to be true, i) the two species must have the same diet and ii) there must be some overlap of chick-rearing during which time their diets are less similar than when not overlapping.

Greg Mudge and Mark Tasker described their teams' surveys in the Moray Firth and North Sea, respectively. Their standardized methods produced detailed density maps allowing inferences about feeding areas and ranges of auks. Strong diurnal rhythms, particularly during the breeding season, were demonstrated in more detailed analyses. These diurnal (and other) rhythms can effectively reduce effective survey coverage and should be considered in monitoring programmes covering larger areas, where such phenomena may not be apparent.

Mike Cullen gave an overview of Australian work on little Penguins. Emetics were used to yield 700 stomach samples from 1 200 penguins. A change of diet between breeding (pilchard) and nonbreeding (anchovy) seasons was observed. Metabolic studies indicated an estimated 300 g/day/1100 g penguin for maintenance costs. Amongst the interesting gadgets used were small, cheap and simple capillary tube depth gauges, and counters (and possibly weigh-bridges) on the runways to breeding colonies.

Monitoring of northern breeding species was standardized throughout participating nations. Martin Heubeck (Shetland Islands) raised concern about the nonrandom selection of sample plots and demonstrated how unrepresentative plots can be. Joel Hubbard (USA) gave an excellent slide show and briefly described the MMS oil spill risk model. Ed Murphy related the breeding performance of Thickbilled and Common Murres (guillemots) to "heating degree days"; low success in extremes of temperature. Species feeding on Walleye Pollack have suffered since the development of the pollack fishery in 1970's. E. Donchin (France) concentrated on data recording procedures suitable for the SAS software system. B. Olsen (Denmark) discussed time-lapse photography of guillemots to show movement of individuals on a breeding ledge. Nils Rov and T. Nygard (Norway) recounted extensive population surveys of breeding and wintering species, respectively. Considering the inaccessibility of many of the colonies (much of the counting made from an inflatable dinghy) the surveys were creditably detailed.

P.H. Becker (FRG) conducted surveys on 28 islands off northeast Germany and described how gulls were mainly increasing, terns and plovers mainly decreasing. Three factors were hypothesized as being related to these trends: i) changes in habitat structure, particularly primary, secondary and tertiary dunes, ii) pesticides, which are most dangerous to species feeding at a higher trophic level (i.e. terns) and iii) gull predation on terns. Robert Barret (Norway) considered 20 years of auk and kittiwake data and attributed declines to human causes, mainly hunting, fouling in fishing gear and the encroachment of mink.

Mike Harris (UK) gave an excellent review of colony census techniques. Logistics of counting at colonies (safety of observer, ease of counting, ease of colony boundary definition) too often result in nonrandom selection of plots. Optimum plot size is best determined by considering the coefficient of variation (200 individual auks is usually a good size plot). The C.V. is inflated mostly by nonbreeders or failed breeders. At least five counts of each plot should be conducted during the breeding season, but not on consecutive days. The high C.V.'s commonly obtained decrease the representativeness of the monitoring results. Long-term trends can be shown but apparent short-term changes may be spurious. We were reminded how preoccupation with statistics can be counter-productive: annual changes of up to 30 % may not prove mathematically significant, a beach of wrecked birds is hard to ignore.

With these sobering thoughts the conference ended. Outside the formal sessions, much information was exchanged whilst fending off the cold with a pint of beer. The success of this conference was due largely to the diversity of countries participating and the degree of standardization of monitoring methods.

I thank the Seabirds at Sea Team, Nature Conservancy Council for financing my participation at the conference.

A.M. Griffiths, 8 Copsewood, Werrington, Peterborough PE4 6BN, England.

Received 28 May 1985

Proceedings of the conference reviewed above (edited abstracts only) are available from Mark Tasker at: Seabirds at Sea Team, Nature Conservancy Council, 17 Rubislaw Terrace, Aberdeen AB 1 1XE, Scotland, U.K. The full reference is:

TASKER, M.L. (ED.) 1985. Population and monitoring studies of seabirds. Proceedings of the Second International Conference of the Seabird Group. 36 pp.