

2004 PRBO On-Colony Seabird Studies Synopsis

PRBO was involved in monitoring seabird colonies at seven major sites between southern California and southern Oregon. Information was collected on breeding phenology, reproductive success, chick provisioning and population status, though not for all species at all sites. The following is a brief summary of the results and general observations for each site.

Farallones: (1967-2004)

- Species monitored: ASSP, BRCO, PECO, COMU, PIGU, CAAU, RHAU, WEGU, DCCO, BLOY, TUPU, LHSP
- Productivity was higher this season (and also well above the long term mean) for all species except Cassin's auklets and Ashy storm-petrels, indicating a bounce back from the mild 2002-03 El Niño
- Cassin's auklet productivity was the lowest since 1997 at just 0.6 chicks fledged per pair.
 - Cassin's also delayed breeding this season and failed to attempt second broods for the first time since 1998.
 - Our index of adult mortality at monitored sites was higher than usual, primarily as a result of WEGU predation, resulting in many failed breeding attempts.
- Western gulls experienced the highest productivity in more than a decade and produced more than one chick per pair (1.34) for the first time since 1989. – Not necessarily good news for the other species on the island, particularly CAAU and ASSP.
- Populations were higher for all species continuing a period of rapid growth over the last several years. Some highlights:
 - COMU – 169,000 - up 57% from 2003 (highest recorded since PRBO began monitoring)
 - BRCO – 16,754 - up 49% from 2003 (highest since early 1980s)
 - PIGU – 1,096 - up 119% from 2003
 - CAAU – 29,229 - up 23% from 2003 (highest since 1989)
 - TUPU – 190 - up 86% since 2002 (highest ever recorded on SEFI)
- Juvenile rockfish (*sebastes* spp.) continued to be present in chick diet, along with high proportions of anchovy this year.

Alcatraz: (1996-2004)

- Species monitored: BRCO, PECO, PIGU, WEGU, BLOY
- Populations increasing for BRCO and PIGU (over 700 BRCO nests and more than 30 PIGU sites) – highest numbers recorded for both of these species since we began monitoring
- Populations leveling out for WEGU (>900 pair) and PECO (13 pair) with only small (<1%) increases from 2003
- Productivity was mixed at this colony:
- BRCO had a good reproductive success and the earliest breeding on record for this colony (clutch initiation began before March 17th), but they failed to attempt double broods for the first time since 2000.
- PECO had poor reproductive success productivity (less than one chick per pair) this season.

Año Nuevo: (1993-2004)

- Species monitored: RHAU, WEGU, BRCO, PECO, PIGU, BLOY, BRPE
- Most populations increasing at this colony over the last several years with particularly large increases in the number of breeding BRCO (more than doubled to >1900 pairs)
- Productivity in 2004 was mixed. BRCO and WEGU had relatively high productivity, whereas PECO, RHAU and CAAU had very poor reproductive success
- BRPE numbers were high: Juvenile numbers peaked in early June (~550) while adults increased in July and August (~650-1200)

Vandenberg Air Force Base: (1999-2004)

- Species monitored: BRCO, PECO, PIGU, WEGU, BLOY, LETE, BRPE
- Increases in all populations but LETE.
- LETE adults showed up at the colony, but failed to breed
- All breeding species exhibited poor reproductive success
- There were record high numbers of juvenile BRPEs attending roosts this year. Usually adults dominate roosts at VAFB, but the opposite seems to be true this year, likely related to high reproductive success reported at SCB colonies this year.
- Many dead juvenile BRPE found late in the season coinciding with reports of juvenile pelican mortality statewide.

Alameda Least Tern Project: (2001-2004)

- Third year of a least tern diet study in Alameda
- We observed feedings of fish at the colony, collected and identified dropped fish, analyzed fecal samples, and conducted foraging observations of terns on the Bay and along Crown Beach (in Alameda, southeast of the colony)
- Feeding frequency was lower than last season
- Silversides, Pacific herring, Pacific sardine, northern anchovy, and surfperch species were the most abundant species of dropped fish and in fecal samples
- We found a decrease in the percentage of herring, sardine and anchovy in the dropped prey collections compared to 2003 that may reflect a decrease in abundance of these populations in the Bay.
- Observations of LETE on the Bay and at Crown Beach indicated that foraging was concentrated to the nearshore waters south and southeast of the tern colony (similar to 2003 results)

Saddle Rock (Oregon): PRBO 2004, FWS (1979-2004),

- New site for PRBO in 2004 conducting Leach's storm petrel population and diet studies
- Very little is known about Leach's Storm-petrel (*Oceanodroma leucorhoa*) in the California Current System (CCS)
- USFWS estimated 60,000-80,000 Leach's Storm-petrels occurred at this location in 1988 and may host as much as 30% of the entire CCS population.
- **Objectives:**
 - Assess Leach's Storm-petrel breeding population status at Saddle Rock (using mark/recapture and index plot surveys)
 - Sample storm-petrel regurgitations during the chick-rearing period to determine diet composition,
 - Determine predation rates on storm-petrels
- **Results:** Still being analyzed
 - 3356 birds caught in 20 netting sessions – will be analyzed using MARK to arrive at population and survival estimates
 - 644 diet samples collected – analysis of samples to be conducted by cooperators at the Oregon Institute of Marine Biology
 - Evidence of substantial predation from Great Horned Owls, Western Gulls and River Otters

Castle Rock:

- PRBO began collaborating with D. Jaques on studies of COMU, BRCO, PECO and WEGU at this site. D. Jaques will give update on results.

Alphabetical Species Code Translations:

ASSP	Ashy Storm-Petrel
BLOY	Black Oystercatcher
BRCO	Brandt's Cormorant
BRPE	Brown Pelican
CAAU	Cassin's Auklet
COMU	Common Murre
DCCO	Double-crested Cormorant
LETE	Least Tern
LHSP	Leach's Storm-Petrel
PECO	Pelagic Cormorant
PIGU	Pigeon Guillemot
RHAU	Rhinoceros Auklet
TUPU	Tufted Puffin
WEGU	Western Gull