

## CLARENCE BROCKMAN LINTON (1880–1925): CHANNEL ISLANDS ENTREPRENEUR, ORNITHOLOGICAL COLLECTOR, AND PIONEER MARICULTURIST

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**Abstract**—Clarence Brockman Linton (1880–1925) was a little-known naturalist and Channel Islands entrepreneur at the beginning of the twentieth century. His multiple interests included ornithology, archaeological pot-hunting, and abalone pearl mariculture, activities by which he made his living. From 1907 through 1910 Linton concentrated his efforts on Channel Islands birds, during which time he collected and sold at least 1061 bird skins, and a small number of egg sets from Santa Cruz, San Clemente, San Nicolas, and Santa Barbara islands—more than any other Channel Island bird collector. His specimens, representing 97 species, are currently housed in 21 museums around the world. Linton also published 11 island-related articles in the ornithological journals, *Condor* and *Auk*, before he was 30. His ornithological work adds to the body of knowledge about the birds of the California Channel Islands, and provides specimens and important information relative to the distribution and status of birds on these islands during the early part of the twentieth century. In January 1909, while excavating Indian burials on San Nicolas Island, Linton came across 13 immense pearls he deduced had come from red abalones. According to Linton, “These average the size of an English walnut, and if freshly taken from the shells would be worth easily \$3500.” Excited by new economic possibilities, Linton redirected his island interests to the business of abalone harvesting and pearl mariculture. He purchased the 60-foot power cruiser, *Flyer*, and by 1911 had secured rights to offshore waters at San Clemente, San Nicolas, and Santa Barbara islands. His mariculture efforts were the first attempted in southern California. Linton’s pioneering pearling venture was so successful that for a time he owned a jewelry store in Long Beach from which he sold his cultured abalone pearls. By 1914, however, Linton had abandoned all involvement with the California Channel Islands. He separated from his wife and moved to Seattle in 1918, before returning to California where he died in 1925 at age 44.

### INTRODUCTION

The late 1800s and early 1900s was a period of discovery and intensive collecting of specimens from the California Channel Islands. During this period, most of the birds endemic to the Channel Islands were first described. Also, the majority of birds collected from the Channel Islands that are today housed in museum collections around the world were collected during this period. While most collectors were individuals working for colleges, universities, or museums, there were a number of individuals who actively collected specimens for their own private collections, or for sale to public institutions or other private collections. Clarence

Brockman Linton is one of the least known of these private collectors.

Clarence Brockman Linton (1880–1925) was a self-trained naturalist, curio collector, ornithologist, and pioneering mariculturist, who developed a great interest in the California Channel Islands in the early 1900s. During a time when the three largest islands were privately owned and title to the remaining five rested with the U.S. government, Linton found unique ways to make his living on the islands, despite being neither an owner nor a primary government lessee. From 1907–1910 he collected bird specimens to sell to public institutions and to individuals who maintained private collections. His four years of fieldwork resulted in

significant contributions to knowledge of Channel Islands ornithology. Today Linton's specimens are found in at least 21 institutions and museums worldwide. In 1909 Linton refocused his island interests to raising pearls in abalones, thus becoming California's first mariculturist. Although he enjoyed a modest amount of success at this pioneering venture, he gave up his island mariculture business within six years. This paper summarizes the southern California life of Clarence Brockman Linton and his important Channel Islands ornithological contributions and pioneering pearl mariculture venture.

### BIOGRAPHICAL SKETCH (1880–1925)

Clarence Brockman Linton (Fig. 1) was born in Illinois on October 4, 1880 to Sarah and Horace Linton (1847–1921). Horace had married Sarah Brockman in Jackson County, Illinois on February 6, 1879. The family moved to Kansas, and in 1887, when Clarence was 6 years old, his family moved west to Whittier, California, where they were a part of a group of families who established a Quaker colony (Sanford 1978). Linton attended local schools and graduated from Whittier College (*Daily Enterprise*, October 10, 1967). On January 22,



Figure 1. Clarence Brockman “C. B.” Linton (1880–1925).

1905, at the age of 23, Linton married Blanche Eliza Lashlee (1883–1976) of Nebraska, although that marriage ended in divorce.

Between 1905 and 1907, Linton developed an interest in the California Channel Islands. At the time, the three largest of the eight islands were privately owned, and the other five were government owned, with leases granted to private individuals. Joseph G. Howland (1862–1923), manager of Santa Catalina Island for William Banning, held leases to San Clemente Island (1901–1918), San Nicolas Island (1909–1919), and Santa Barbara Island (1909–1914; Daily 1987), and it was undoubtedly through a relationship with Howland that Linton gained legal access to these leased islands. In 1907 he made five trips to San Clemente Island and two to Santa Cruz Island with the owner's permission in order to collect birds (Table 1). Letters in the Smithsonian Archives confirm that Linton corresponded with prospective buyers before and after his island trips: October 29, 1907 “Dear Mr. [Alex] Wetmore, ...I have just returned from 3 weeks on San Clemente Island collecting for myself and Drs. Bishop and Dwight of the [Cooper Ornithological] Club. I have a pair of San Clemente wren, rock wren, horned lark, song sparrow, and towhee to exchange...”; and November 17, 1907 “Dear Mr. Wetmore, ...I am leaving tonight for 4 weeks on Santa Cruz Island and will write you when I return...” (Smithsonian Institution Archives, Record Unit 706, Box 36, Folder 3, C. B. Linton correspondence 1907–1908). Linton was accompanied on this November 1907 trip to Santa Cruz Island by his stepfather, Horace Linton, ornithologist George Willett, and crew fisherman “Cold-foot Jorgensen” (Linton 1908b). Permission to camp and to collect birds on the island was granted by Mr. Fred Caire, owner of the island (Linton 1908b). During this trip the field crew collected birds and camped at Coches Prietos, Potato Harbor, Northwest Harbor and in the pines near Prisoners' Harbor (Linton 1908b). The following year, 1908, Linton returned to Santa Cruz and San Clemente islands at least three more times each, and to San Nicolas Island once (likely without permission), to collect additional specimens.

The year 1909 was particularly significant for Linton and his island enterprises: Joseph G. Howland's San Nicolas Island and Santa Barbara

Table 1. Dates when Clarence Brockman Linton was collecting birds on the Channel Islands.

Date	Island	Published article
January 23–February 19, 1907	San Clemente Island	Linton (1908a)
March 7–April 7, 1907	San Clemente Island	Linton (1908a)
May 12, 1907	San Clemente Island	Linton (1908a)
May 17, 1907	Santa Cruz Island	
July 2, 1907	San Clemente Island	Linton (1908a)
October 5–October 21, 1907	San Clemente Island	Linton (1908a)
November 7–December 23, 1907	Santa Cruz Island	Linton (1908b)
January 9, 1908	San Clemente Island	
March 7, 14, 30–April 1, 1908	San Clemente Island	
September 26, 1908	San Nicolas Island	
September 29–October 27, 1908	Santa Cruz Island	
November 5, 1908	Santa Cruz Island	
November 14–December 12, 1908	San Clemente Island	Linton (1909)
December 19, 1908	Santa Cruz Island	
January 1, 1909	Santa Barbara Island	
January 1–15, 1909	San Nicolas Island	
April 5, 1909	San Nicolas Island	
May 5, 10, 13, 1909	San Nicolas Island	
June 12, 1909	San Clemente Island	
July 4–5, 1909	San Nicolas Island	
October 14–15, 1909	Santa Cruz Island	
March 27–June 5, 1910	San Nicolas Island	

Island leases commenced in 1909, thus affording Linton legal access to these islands. It was during a trip to San Nicolas Island that Linton discovered a cache of large pearls. In October 1909 he sublet a portion of Santa Barbara Island from Howland for \$125 for the propagation of pearls in abalones. Thus Linton redirected his focus from collecting and selling ornithological specimens to developing a mariculture business for abalone pearl, meat, and shell, and began to establish camps on a number of the islands for this new business. By the end of the year, Horace and Sarah Linton had divorced, and Horace took a job tending sheep for Howland on San Nicolas Island. With his stepfather working on San Nicolas Island, Clarence had access to the island to pursue his commercial interests in specimen collecting and pearl mariculture.

Early in 1910, Linton met and married Texas-born socialite, Lillian T. McClelland (1888–1977) (Sanford 1978; Fig. 2), and they spent their 3-month-long honeymoon in a rustic tent camp on San Nicolas Island. The former glove-wearing society-

bride adapted to the harsh conditions of camping on an isolated island. During their stay on the island, Linton advanced his search for Indian artifacts (Fig. 3) and collected and prepared bird specimens for sale (Fig. 4). A pregnant Lillian maintained the camp (Fig. 5) and assisted Clarence with collecting birds (Fig. 6). Lillian also kept brief notes in a 1910 diary, preserved in the family by their granddaughter, Nancy Hudson, and donated in 2008 to the Santa Cruz Island Foundation. In it, Lillian mentions daily events and describes camp life: “March 30 got water from 2-1/2 blocks away, took abalone meat from shells to look for pearls; May 28 C[larence] found Indian skeletons; May 29 cooked my first cake for supper with sea gull egg. It was fine; June 5, C[larence] skinned a fox” (L. Linton unpublished manuscript). Meals on the island included fried abalones in corn bread, lemon tapioca pudding, hotcakes, beans, dried apricots, potatoes, and bread. One meal prepared on April 5, 1910 by Linton’s Mexican cook consisted of laysan albatross (*Phoebastria immutabilis*) stew, much to



Figure 2. Lillian T. McClelland (1888–1977). Photo from Clarese Prior.

the chagrin of Clarence Linton, who salvaged the bird's severed head for his collection (Peters 1938; Fig. 7). This is the first and only known specimen record of this species from any of the California Channel Islands.

After their extended honeymoon, the Lintons took up residence in Long Beach, California. Within four years they had three children: Clarence McClelland "Mack" (1910–1990); Theresa (1911–2005); and Marian (1913–c. 1920). The Lintons separated sometime around 1918, and Clarence moved to Seattle. Although Lillian joined him for a brief reconciliation, after the death of their youngest child, Marian, they both returned to Los Angeles where they lived separately until Linton died in 1925 at age 44 of tuberculosis. (N. Hudson, personal



Figure 3. Clarence Linton excavating Indian burials on San Nicolas Island. In 1909 he discovered a cache of large pearls, which led to his interest in mariculture.



Figure 4. C.B. Linton preparing birds at his camp on San Nicolas Island, 1910.

communication). Clarence Brockman Linton is buried in Hollywood Forever Cemetery (Section 12, Plot 15), Los Angeles, California next to his second wife, Lillian. Of their surviving children: Mack graduated from Stanford University and University of Southern California law school; and Theresa attended Otis Art Institute in Los Angeles and became a regionally popular artist.

### LINTON AS ORNITHOLOGICAL COLLECTOR, 1907–1910

Beginning in 1907 and continuing through 1910, Linton developed a commercial bird collecting operation on the Channel Islands and along the adjacent southern California mainland. Linton visited four of the Channel Islands (Santa Cruz, San Nicolas, Santa Barbara, and San Clemente islands) on numerous occasions to collect



Figure 5. Lillian Linton at camp during her honeymoon on San Nicolas Island, March–June 1910.



Figure 6. Lillian Linton with shotgun used for collecting birds seen here with her companion, "Doc," during her honeymoon on San Nicolas Island, 1910.

birds (Table 1). He collected his first bird, an island horned lark (*Eremophila alpestris insularis*), at San Clemente Island on January 19, 1907, and his last bird, a snowy plover (*Charadrius alexandrinus*), at San Nicolas Island on May 24, 1910. During this 4-year period, Linton collected a total of 1061 scientific study skins from 97 species (Appendix A). He was the most prolific of the collectors of Channel Island birds: the birds he collected represent 12.1% of the 8,754 birds known to have been collected from the Channel Islands (P.W. Collins, unpublished data). Linton collected a few egg sets from the islands; however, his principal focus was collecting bird skins. Linton sold birds collected from the Channel Islands to a number of individuals who maintained private bird collections and to a number of public institutions. Today his Channel Islands bird specimens are housed in 21 museums: 17 in North America and 4 in foreign countries (Table 2). Five of these museums (Museum of Comparative Zoology, Field Museum of Natural History, Los Angeles County Museum, Museum of Vertebrate Zoology, and British Museum of Natural History) hold 86.6% of Linton's Channel Islands bird specimens, with the Museum of Comparative Zoology at Harvard holding the largest percentage (61.8%, n=655 specimens; Table 2). The majority of birds collected by Linton were collected on San Clemente and Santa Cruz islands, with additional specimens collected on San Nicolas and Santa Barbara islands (Appendix A).

Linton collected a total of 97 species, including 60 species from San Clemente Island, 22 species from San Nicolas Island, 63 species from Santa Cruz Island, and 5 species from Santa Barbara Island. His collections spanned all taxonomic

groups, including 19 species of marine/aquatic birds (9.9%); 12 species of shore birds (10.1%); and 66 species of land birds (79.3%; Appendix A). Twelve species of land birds (12.4% of all species collected) and over half of his Channel Islands specimens (55.5% or 589 specimens) were endemics to the islands (Appendix A). The most commonly collected species were song sparrow (*Melospiza melodia*), spotted towhee (*Pipilo maculatus*), horned lark (*Eremophila alpestris*), island scrub-jay (*Aphelocoma insularis*), Bewick's wren (*Thryomanes bewickii*), house finch (*Carpodacus mexicanus*), wandering tattler (*Heteroscelus incanus*), rock wren (*Salpinctes obsoletus*), orange-crowned warbler (*Vermivora celata*), hermit thrush (*Cathrus guttatus*), and sage sparrow (*Amphispiza belli*; Appendix A). Eight of these eleven species or subspecies were island endemics. Linton also collected a number of specimens that represent either first records or only known records for several species on the Channel Islands. These include laysan albatross from San Nicolas Island; yellow-billed cuckoo (*Coccyzus americanus*) and canyon wren (*Catherpes mexicanus*) from Santa Cruz Island; and long-eared owl (*Asio otus*), red-naped sapsucker (*Sphyrapicus nuchalis*), summer tanager (*Pringa rubra*), rusty blackbird (*Euphagus carolinus*), and Harris' sparrow (*Zonotrichia querula*) from San Clemente Island.

Three land bird endemics found on San Clemente Island may have been impacted as a result of Linton's collecting. Between 1907 and 1908, Linton collected 35 Bewick's wrens (*Thryomanes bewickii leucophrys*), 94 song sparrows (*Melospiza melodia clementae*), and 71 spotted towhees (*Pipilo maculatus clementae*) from San Clemente Island.



Figure 7. Laysan albatross head (MCZ 316509) salvaged by Linton from a specimen which had been killed and cooked for supper by the Mexican 'camp cook' at San Nicolas Island on April 5, 1910. Photo by Brian Burd.

Table 2. Museums holding bird specimens collected by Clarence Brockman Linton from the Channel Islands off the coast of southern California.

Museum	Number of specimens
Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts	655
Field Museum of Natural History, Chicago, Illinois	123
Los Angeles County Museum, Los Angeles, California	52
Museum of Vertebrate Zoology, University of California, Berkeley, California	45
British Museum of Natural History, Tring, England	43
Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia	24
American Museum of Natural History, New York, New York	18
California Academy of Sciences, San Francisco, California	16
San Diego Natural History Museum, San Diego, California	14
University of Kansas, Museum Natural History, Lawrence, Kansas	14
Museum für Naturkunde, Humboldt University of Berlin, Berlin, Germany	14
Denver Museum of Natural History, Denver, Colorado	10
Cornell University Museum of Vertebrates, Ithaca, New York	10
Carnegie Museum of Natural History, Pittsburgh, Pennsylvania	5
Royal Ontario Museum, Toronto, Canada	4
University of Michigan, Museum of Zoology, Lansing, Michigan	4
University of Washington Burke Museum, Seattle, Washington	3
Smithsonian, United States National Museum, Washington DC	2
University of Nebraska State Museum, Lincoln, Nebraska	2
University of California, Los Angeles, California	1
Peabody Museum of Natural History, Yale University, New Haven, Connecticut	1

This intensity of collecting undoubtedly contributed to the decline of these three island endemics, which are today extirpated from the island. The extent to which over-collecting or habitat loss from overgrazing by feral herbivores led to the extirpation of these three island endemics on San Clemente Island is unknown. However, both factors likely contributed to the extinction of these taxa on San Clemente Island.

Although family recollections record that Linton attended ornithology classes at Whittier College (N. Hudson, personal communication). Linton had no formal training as an ornithologist; however, he was an active member of the Los Angeles branch of the Cooper Ornithological Club. He published a total of 11 papers relative to his work

with Channel Island birds. Of particular note are three papers that summarize information about the birds he collected on San Clemente and Santa Cruz islands in 1907 (Linton 1908a and b) and on San Clemente Island in 1908 (Linton 1909b). Most of Linton's other papers are short notes about a particular species' distribution or taxonomic status (Linton 1908c–g, 1909a), or about its nesting habits (Linton 1911a and b). After publishing the first three papers related to birds observed and collected on San Clemente and Santa Cruz islands, Linton did not publish any additional overview papers about the seasonal status, distribution, or abundance of birds on these islands. However, he continued collecting birds on the islands throughout the rest of 1908 and all of 1909 and 1910. Birds collected

during this later period not only contributed additional specimens from previously collected species to museum collections, but also documented new distributional records for several of the islands. A number of these island records have not previously been published, because most of Linton's Channel Island specimens were largely housed in private and foreign collections that were not readily accessible to ornithologists. Thus, they were overlooked by Alfred Brazier Howell when he prepared his seminal publication on the birds of the islands off the coast of southern California (Howell 1917), and by Joseph Grinnell and Alden H. Miller when they prepared "The Distribution of the Birds of California" (Grinnell and Miller 1944).

### LINTON AS CALIFORNIA'S PIONEER MARICULTURIST, 1909–1914

In 1909 Clarence Linton began to redirect his business interests from ornithological collecting to that of culturing pearls in abalone shells—a decision spurred by his discovery of thirteen walnut-sized pearls buried with bones of Native Americans on San Nicolas Island (*Los Angeles Times*, February 1, 1909). While excavating remains of Indians on San Nicolas Island, Linton discovered the remains of a chief around whose neck were found "thirteen immense pearls, each one with a small hole drilled in the smaller end for stringing" and which were the "size of an English walnut and if freshly taken from the shells would be worth easily \$3500" (*Los Angeles Times*, February 1, 1909). Linton felt that the pearls came from red abalone, an important source of food for Native Americans that lived on the island. When he returned to the mainland Linton placed these pearls on exhibit at the Hotel Virginia in Long Beach (*Los Angeles Times*, July 15, 1909).

By the summer of 1909 Linton had collected enough pearls to warrant his pursuit of an abalone pearl mariculture business on the Channel Islands. The process of culturing pearls from abalones involved "drilling a hole through the shell center, pushing a round ball made from shell, and filling the outside end of the hole with beeswax and cement." (Edwards 1914). Linton established a number of island camps (Figs. 8–9) on San Clemente, Santa Barbara, and San Nicolas islands through arrangements made with J.G. Howland, and he

employed Japanese divers (Figs. 10–11) to plant the seeds for pearl growth in black abalone beds. His island employees also harvested abalone meat and shells (Fig. 12). By 1910, Linton had amassed enough pearls to open a jewelry store in Long Beach (Fig. 13). In September 1911 Linton purchased the 60-foot power-cruiser, *Flyer* (Fig. 14), to service his island interests (*Los Angeles Times*, September 28, 1911). He was familiar with *Flyer*, as he had chartered the vessel at least twice in 1909 to take members of the Cooper Ornithological Club, of which he was a member, on birding expeditions to the Channel Islands (*Los Angeles Times*, June 26, 1909 and July 8, 1909).



Figure 8. Linton established camps on several islands to support his commercial operations.

Encouraged by his success, Linton filed Articles of Incorporation on behalf of his C.B. Linton Investment Company on February 15, 1911. The company reported capital stock of \$30,000 and named incorporators and subscribers: C.B. Linton, J.W. Wood, Peter McClelland, F. Earl Brown, and J.C. Brown (*Los Angeles Times*, February 16, 1911). By the end of 1911 the Linton concessions had shipped 60 tons of abalone shells, and had beds of 3000 abalones that were used to grow abalone pearls. On December 9, 1911, the *Los Angeles Times* reported "The process is new, pearls being developed in the course of one or two years around a composition nucleus that is planted inside the abalone shell. Some of these have been removed from abalones after being planted eight months, and show the scheme is a success..."

Over the next year, however, Linton began to voice frustration over the number of abalone at the



Figure 9. Linton's Camp Number 6, San Nicolas Island, 1909.

islands being harvested commercially, as he lacked legal authority to stop anyone from taking his mariculture gastropods. Always on the lookout for economic opportunity, in April 1912 Linton took a four-month break and outfitted *Flyer* for an expedition to lower California in search of a reported 10 northern elephant seals (*Mirounga angustirostris*), thought at the time to be the last to exist, and each with an estimated value of \$5000 (Sanford 1979). In addition to Linton, members of the expedition included Captain George H. Child; George Willett, ornithologist; H.N. Lowe, marine scientist; William McCluskey of the State Museum of Los Angeles; Ralph Johnson; Edward Bellringer; and Paul McCreary (*Los Angeles Times*, April 5, 1912). No log of the trip has been found; however, photographs of elephant seals taken on the voyage are on file at the Santa Cruz Island Foundation.

Upon *Flyer's* return, Linton traveled to Washington, D.C. in July 1912 and met with officials from the U.S. Bureau of Fisheries to discuss the possibilities of establishing a preserve on one or more of the islands for "the study and advancement of the pearl-growing industry which



Figure 10. Linton's Japanese abalone divers.



Figure 11. Linton's Japanese abalone harvesters.

has made considerable progress under private experiments" (*Los Angeles Times*, July 18, 1912). As commercial abalone harvesting continued, Linton's frustrations grew:

Islands denuded. Clarence B. Linton of Long Beach, who has the abalone concession on San Nicolas and San Clemente Islands, says that "the accessible parts of the Channel Islands have been almost denuded of abalones, and that it will not be a very long while until the abalone shell and meat industry in Southern California will be a thing of the past..." (*Los Angeles Times*, August 27, 1912).

In February 1913, the government granted Linton a lease giving him exclusive rights to 12½ miles of San Nicolas Island coastline, both below high tide line and for a specified distance shoreward,



Figure 12. Abalone meat drying and abalone shells sacked for shipment to market.



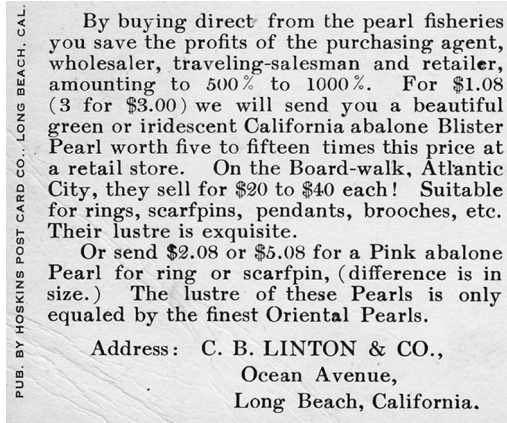


Figure 13. Linton's post-card advertisement for his pearling operation on the islands.

for the propagation of pearls in abalones. With such a lease, Linton gained legal authority to punish those who would harvest his pearl mariculture beds (*Los Angeles Times*, February 28, 1913).

After six years of moderate success in the pearl mariculture business at various Channel Islands, and despite his success in obtaining a special coastal lease on San Nicolas Island in 1913, Linton gave up the mariculture business in 1914 and sold his boat *Flyer* to Channel Islands fisherman Charles Hanson (*Los Angeles Times*, May 23, 1914). Charles Brockman Linton set his place in history as California's pioneer mariculturist.

## CONCLUSIONS

Clarence Brockman Linton was a Channel Islands entrepreneur, who between 1907 and 1910



Figure 14. Linton purchased the 60-foot launch *Flyer* in September 1911 to service his island abalone harvest and mariculture interests.

collected and sold birds from the Channel Islands to museums and private collectors throughout North America and Europe. Linton's greatest contribution relative to the Channel Islands was as an amateur ornithologist. As a result of his bird collecting, Linton contributed a significant proportion of the Channel Islands bird specimens found in museum collections today. His publications documented the distribution and status of birds on San Clemente and Santa Cruz islands in the early 1900s. The birds that Linton collected from the islands serve as a temporal sample of material that can be used for future studies that require specimens from earlier time periods. Linton's specimens are also important because they can provide tissue samples that can be used for future genetic studies focused on the evolution and conservation of Channel Islands birds. Linton's work collecting birds on the islands has clearly added to the body of knowledge about the birds of the California Channel Islands and has provided specimens and important information relative to the distribution and status of birds on these islands during the early part of the twentieth century. In 1909, motivated by his discovery of a number of large pearls found in an archaeological site on San Nicolas Island, Linton became California's pioneer mariculturist when he developed the first pearl-growing industry in abalone beds around the California Channel Islands.

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Appendix A . Birds collected by Clarence Brockman Linton on the Channel Islands from 1907 through 1910. SCRI = Santa Cruz Island, SNI = San Nicolas Island, SBI = Santa Barbara Island, SCLI = San Clemente Island

Scientific name	Common name	Endemic sub-species	SCRI	SNI	SBI	SCLI	Total collected
<i>Accipiter striatus</i>	Sharp-shinned hawk					1	1
<i>Actitis macularia</i>	Spotted sandpiper					1	1
<i>Aeronautes saxatalis</i>	White-throated swift		2				2
<i>Aimophila ruficeps</i>	Rufous-crowned sparrow	obscura	21				21
<i>Amphispiza belli</i>	Sage sparrow	clementeae				24	24
<i>Anthus rubescens</i>	American pipit					1	1
<i>Aphelocoma insularis</i>	Island scrub-jay	insularis	72				72
<i>Aphriza virgata</i>	Surfbird			1			1
<i>Arenaria interpres</i>	Ruddy turnstone			19			19
<i>Arenaria melanocephala</i>	Black turnstone		12	6		5	23
<i>Asio otus</i>	Long-eared owl					1	1
<i>Athene cunicularia</i>	Burrowing owl		2	2		8	12
<i>Calidris alba</i>	Sanderling					2	2
<i>Calidris minutilla</i>	Least sandpiper			2		2	4
<i>Calypte anna</i>	Anna's humming-bird		5				5
<i>Carduelis psaltria</i>	Lesser goldfinch		1				1
<i>Carpodacus mexicanus</i>	House finch	clementis	20	3		24	47
<i>Carpodacus purpureus</i>	Purple finch		1				1
<i>Catharus guttatus</i>	Hermit thrush		4	1		26	31
<i>Catharus ustulatus</i>	Swainson's thrush					2	2
<i>Catherpes mexicanus</i>	Canyon wren		1				1
<i>Cerorhinca monocerata</i>	Rhinoceros auklet		9			2	11
<i>Ceryle alcyon</i>	Belted kingfisher					2	2
<i>Charadrius alexandrinus</i>	Snowy plover			2			2
<i>Chondestes grammacus</i>	Lark sparrow		1				1
<i>Coccyzus americanus</i>	Yellow-billed cuckoo		2				2

Appendix A (continued). Birds collected by Clarence Brockman Linton on the Channel Islands from 1907 through 1910. SCRI = Santa Cruz Island, SNI = San Nicolas Island, SBI = Santa Barbara Island, SCLI = San Clemente Island

Scientific name	Common name	Endemic sub-species	SCRI	SNI	SBI	SCLI	Total collected
<i>Colaptes auratus</i>	Northern flicker		4	1		3	8
<i>Corvus corax</i>	Common raven		9	1		5	15
<i>Dendroica coronata</i>	Yellow-rumped warbler					3	3
<i>Dendroica petechia</i>	Yellow warbler		3				3
<i>Dendroica townsendi</i>	Townsend's warbler		2			1	3
<i>Empidonax difficilis</i>	Pacific-slope flycatcher	insulicola	7			4	11
<i>Empidonax traillii</i>	Willow flycatcher		2	1		1	4
<i>Eremophila alpestris</i>	Horned lark	insularis	11	1		79	91
<i>Euphagus carolinus</i>	Rusty blackbird					1	1
<i>Falco sparverius</i>	American kestrel		2			2	4
<i>Fulmarus glacialis</i>	Northern fulmar		10				10
<i>Gavia pacifica</i>	Pacific loon		8				8
<i>Gavia stellata</i>	Red-throated loon		1				1
<i>Haematopus bachmani</i>	Black oyster-catcher		5				5
<i>Haliaeetus leucocephalus</i>	Bald eagle					1	1
<i>Heteroscelus incanus</i>	Wandering tattler		8	18	2	11	39
<i>Icteria virens</i>	Yellow-breasted chat		2				2
<i>Ixoreus naevius</i>	Varied thrush					4	4
<i>Junco hyemalis</i>	Dark-eyed junco		9			1	10
<i>Lanius ludovicianus</i>	Loggerhead shrike	anthonyi, mearnsi	11			11	22
<i>Larus californicus</i>	California gull			1		1	2
<i>Larus heermanni</i>	Heermann's gull		13	2		6	21
<i>Larus occidentalis</i>	Western gull			1		2	3
<i>Melanitta perspicillata</i>	Surf scoter		1				1
<i>Melospiza lincolni</i>	Lincoln's sparrow		7				7
<i>Melospiza melodia</i>	Song sparrow	clementae, graminea			8	94	102

Appendix A (continued). Birds collected by Clarence Brockman Linton on the Channel Islands from 1907 through 1910. SCRI = Santa Cruz Island, SNI = San Nicolas Island, SBI = Santa Barbara Island, SCLI = San Clemente Island

Scientific name	Common name	Endemic sub-species	SCRI	SNI	SBI	SCLI	Total collected
<i>Mergus serrator</i>	Red-breasted merganser		1				1
<i>Mimus polyglottos</i>	Northern mockingbird		3			2	5
<i>Numenius phaeopus</i>	Whimbrel		3				3
<i>Pandion haliaetus</i>	Osprey					2	2
<i>Passerculus sandwichensis</i>	Savannah sparrow		3	2			5
<i>Passerella iliaca</i>	Fox sparrow		9			7	16
<i>Pelecanus occidentalis</i>	Brown pelican					1	1
<i>Phalacrocorax auritus</i>	Double-crested cormorant					3	3
<i>Phalacrocorax penicillatus</i>	Brandt's cormorant		1			8	9
<i>Phalaropus fulicaria</i>	Red phalarope		10				10
<i>Phalaropus lobatus</i>	Red-necked phalarope		1				1
<i>Phoebastria immutabilis</i>	Laysan albatross			1			1
<i>Pipilo maculatus</i>	Spotted towhee	clementae	27			71	98
<i>Piranga ludoviciana</i>	Western tanager		1			2	3
<i>Piranga rubra</i>	Summer tanager					1	1
<i>Podiceps auritus</i>	Horned grebe					1	1
<i>Podiceps nigricollis</i>	Eared grebe		3			3	6
<i>Polioptila caerulea</i>	Blue-gray gnatcatcher		2				2
<i>Psaltriparus minimus</i>	Bushtit		2				2
<i>Ptychoramphus aleuticus</i>	Cassin's auklet		3		2	2	7
<i>Puffinus griseus</i>	Sooty shearwater		1				1
<i>Regulus satrapa</i>	Golden-crowned kinglet		2				2
<i>Salpinctes obsoletus</i>	Rock wren		9	14		14	37
<i>Sayornis nigricans</i>	Black phoebe		2			2	4
<i>Sayornis saya</i>	Say's phoebe		1	1		3	5

Appendix A (continued). Birds collected by Clarence Brockman Linton on the Channel Islands from 1907 through 1910. SCRI = Santa Cruz Island, SNI = San Nicolas Island, SBI = Santa Barbara Island, SCLI = San Clemente Island

Scientific name	Common name	Endemic sub-species	SCRI	SNI	SBI	SCLI	Total collected	
<i>Selasphorus sasin</i>	Allen's humming-bird	sedentarius	4			5	9	
<i>Sialia currucoides</i>	Mountain bluebird					1	1	
<i>Sitta canadensis</i>	Red-breasted nuthatch		3				3	
<i>Sphyrapicus nuchalis</i>	Red-naped sapsucker					2	2	
<i>Spizella atrogularis</i>	Black-chinned sparrow					1	1	
<i>Sturnella neglecta</i>	Western meadowlark				1	1	2	
<i>Synthliboramphus antiquus</i>	Ancient murrelet		2		2	2	6	
<i>Thalasseus maximus</i>	Royal tern		1	1		11	13	
<i>Thryomanes bewickii</i>	Bewick's wren	nesophilus, leucophrys	24			35	59	
<i>Troglodytes troglodytes</i>	Winter wren		1				1	
<i>Tyrannus verticalis</i>	Western kingbird					1	1	
<i>Tyrannus vociferans</i>	Cassin's kingbird					1	1	
<i>Vermivora celata</i>	Orange-crowned warbler	sordida	24			9	33	
<i>Vireo cassinii</i>	Cassin's vireo		1				1	
<i>Vireo gilvus</i>	Warbling vireo			1			1	
<i>Vireo huttoni</i>	Hutton's vireo		24				24	
<i>Wilsonia pusilla</i>	Wilson's warbler		2				2	
<i>Zenaida macroura</i>	Mourning dove					1	1	
<i>Zonotrichia atricapilla</i>	Golden-crowned sparrow		2				2	
<i>Zonotrichia querula</i>	Harris' sparrow					1	1	
			No.	440	82	15	524	1061
			Specimens					
			No.	221	4	8	356	589
			Endemic Specimens	(50.2%)	(4.9%)	(53.3%)	(67.9%)	(55.5%)