The 43rd Report of the Colorado Bird Records Committee—Decision Summary: Acceptance of Kelp Gull to List of Colorado Birds

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Introduction

This 43rd report presents a summary of the acceptance of Kelp Gull (*Larus dominicanus*) by the Colorado Bird Records Committee (hereafter CBRC or Committee) as species number 481 on the official list of Colorado birds. The actual state list at this time includes 482 species with the CBRC's recent acceptance of Smith's Longspur (*Calcarius pictus*). A summary of the acceptance of that species as well as other recent CBRC decisions will be presented in a future article.

The review and debate process regarding the Colorado Kelp Gull record (2003-78) was extensive, with final acceptance following second-round voting (7-0). Progression to the second round stemmed from a 5-2 vote following first-round deliberations, as acceptance of a record requires six or more "accept" votes (i.e., 7-0 or 6-1). The two dissenting voters in the first round voted not to accept at that time based on issues stemming from possible hybridization and lack of interior vagrancy records. Additional evidence regarding those two subjects was located and distributed to all Committee members during the second round, at which point the dissenting voters changed their opinion. Committee members voting on this record were Coen Dexter, Doug Faulkner, Peter Gent, Joey Kellner, Ric Olson, Brandon Percival, and Larry Semo. Over the past four years since the Kelp Gull's occurrence in 2003, a number of issues have been raised and investigated regarding this controversial bird; this report provides the results of the CBRC analysis.

It was the intent of the CBRC to ensure that all available observer information and reference material were gathered prior to initiating the review process. Adherence to CBRC protocols allowed voting members to conduct a thorough and fair review and analysis of the documentation submitted. In the research process, the CBRC consulted with several authorities who have expertise in various aspects of Kelp Gull and general gull biology: Donna L. Dittmann and Steven W. Cardiff from Louisiana State University Museum of Natu-

ral Science, who have extensively studied the Louisiana Kelp Gull population; Alvaro Jaramillo, a specialist in South American birds; Klaus Malling Olsen, a noted authority of larid identification; and Tony Leukering, who provided valuable information on gull molt. Rachel Hopper also conducted a detailed analysis of the history of captive Kelp Gulls in the U.S. and provided that information to the Committee for review.

Field Encounters

On 17 September 2003, Hugh and Urling Kingery observed a distant dark-mantled gull at Jackson Reservoir in western Morgan County, Colorado, and first identified it as a Lesser Black-backed Gull (*L. fuscus*), though they noted that a few characteristics were not consistent with that species. Photographs by Steve Messick posted to the web soon thereafter drew the attention of Christopher L. Wood, who opined that the bird appeared most similar to a Kelp Gull. The following day, Christopher and Tony Leukering arrived at the site and determined the bird to be a Kelp Gull. Word of this discovery quickly spread and birders arrived *en masse* to Jackson Reservoir. Public agreement was that indeed the bird was a Kelp Gull, a primarily Southern Hemisphere gull with recent vagrant appearances in North America. The bird remained at that location until at least 27 September. For nearly a month the bird could not be relocated and was presumed gone from the state. However, on 19 October, Nick Komar rediscovered it at Fossil Creek Reservoir in Larimer County, roughly 54 miles west-northwest of Jackson Reservoir. The bird spent nearly another month splitting its time between Fossil Creek Reservoir and nearby Donath Reservoir, with the last observation occurring on 20 November 2003.

Description of the Bird

Size, structure, and bare parts

The Colorado Kelp Gull was similar to a Herring Gull in overall size and proportion, save for bill shape and eye size, stockiness, tarsus length, and potentially primary length. Direct comparisons with nearby Ring-billed Gulls (*L. delawarensis*) suggested that the Kelp Gull was approximately one-third larger in height and length. When standing, the wing tips projected quite well beyond the tail, with the tail tip equal to the tip of primary (P) 8. The orangish-yellow bill was heavy, bulbous-tipped and showed a deep gonydeal angle colored in red. The bill was parallel-edged where the maxilla and mandible meet. The head was square and broad with flattened crown. The eyes

appeared small relative to head size, with irides a pale gray and with red orbital rings. The neck and chest were heavy and robust and the back was somewhat humped. The legs were pale yellow-green with long tarsi, which made the gull look characteristically tall.

Plumage

The bird's head, neck, breast, belly, vent, and rump were immaculate white with no apparent streaking. The upperparts were a very dark black, even a shade darker than Great Black-backed Gull (*L. marinus*), matching only Kelp Gull and the *fuscus* subspecies of Lesser Black-backed Gull.

A defining characteristic of most large larids is a series of white scapulars that form a scapular crescent. Large gulls of the Pacific coast—Glaucous-winged (*L. glaucescens*), Western (*L. occidentalis*), Yellow-footed (*L. livens*), Kelp, and Slaty-backed (*L. schistisagus*)—typically display that characteristic. The scapulars of the Colorado bird were primarily black, although one broad white scapular was present. Analysis of numerous photographs of Kelp Gull across its range indicated that the limited white in the scapulars is characteristic of the species and distinguishes it from many other large gulls. A point that will be made later in this paper is that the Colorado bird was in active flight feather molt of the inner primaries during its stay. The question could be posed whether the limited white in the scapulars was due to active scapular molt as well. However, in large gulls, active inner primary molt succeeds body molt, indicating that the scapulars on the Colorado bird were new and fully formed.

In addition to the scapular crescents, all species in the group of large Pacific coast gulls mentioned above usually display broad, white tertial crescents. The Colorado Kelp Gull was in full conformance with that trait, its tertials being rounded, prominent, and roughly half as wide as the bill was long.

When the bird was standing, the primaries appeared long, pointed, and a slight shade darker than the upperparts. When present at Jackson Reservoir, the bird was in obvious flight feather molt, with the right wing displaying missing secondaries (S) 1-3 and P6 demonstrating roughly 1/3 growth. The left wing was similar, with missing S1-3 as well as missing P6 and 7. When standing, the bird exhibited no white tips or mirrors to any of the primaries during its Jackson Reservoir tenure. However, when the bird appeared in Larimer County, flight feather molt had advanced, with white tips present on newly grown P 8 and 9 on the right wing (P10 remaining old), while the left wing expressed a visible white tip on P10 as well as a white mirror. This pattern of molting outer primaries, from P10 lacking a white

Kelp Gull, Jackson Lake SP, Morgan County, October 25, 2003. Photo by Bill Schmoker

Kelp Gull, Jackson Lake SP, Morgan County, October 25, 2003. Photo by Bill Schmoker

Kelp Gull, Jackson Lake SP, Morgan County, September 18, 2003. Photo by Bill Schmoker

Kelp Gull, Jackson Lake SP, Morgan County, October 25, 2003. Photo by Andrew Spencer

Kelp Gull, Jackson Lake SP, Morgan County, October 25, 2003. Photo by Bill Maynard

tip or mirror to at least one P10 with a white tip and white mirror, is evincive of the age progression from 3rd alternate to 4th basic.

From beneath in flight, the contour feathers of the wings were bright white, contrasting with very dark gray primaries and secondaries that gradually darkened toward the outer primaries. The trailing edge to all flight feathers (both above and below) was broadly tipped with white, forming a distinct thick band.

Identification and Expert Opinion

Separation from Similar Species

When attempting to eliminate congener species from identification contention, only those species with dark mantles need to be analyzed. The lack of pink legs, smaller size, darker mantle, and lack of broad white tip to P10 easily eliminated Great Black-backed Gull. Western Gull also has pink legs and differs additionally in having a lighter mantle that contrasts with the black in the outer primaries. Lesser Black-backed, which does have yellow legs, is usually smaller than the Colorado bird, has a much narrower bill with less gonydeal angle, has larger eyes relative to head size, is less robust overall, and generally has a lighter mantle, except members of the nominate *fuscus* group. Slaty-backed Gull also has a lighter mantle, pink legs, a larger mirror to P10, and streaked head/neck in basic plumage. Black-tailed Gull (*L. crassirostris*) is smaller and more elongated, lacks mirrors on P10, has a streaked head in basic plumage, and has a red-tipped bill bordered by black. Yellow-footed Gull is the species that most closely resembles Kelp in the Northern Hemisphere. Yellow-footed Gull normally has brighter yellow legs, unlike the yellow/green legs of Kelp Gull. The mantle color of Yellow-footed is lighter in shade and contrasts with the black primaries. The orbital ring on Yellow-footed Gulls is yellow, unlike the red orbital ring displayed by Kelp Gull and by the Colorado bird.

In the Southern Hemisphere, there are two other large larids with dark mantles: Pacific Gull (*L. pacificus*) from Australia and Dolphin Gull (*L. scoresbii*) from southern South America. Neither of those species has occurred in the Northern Hemisphere. Pacific Gull has an enormous orange-red bill, considerably larger than that of Kelp Gull; lacks white tips or mirrors to the primaries; and shows a black band across the inner rectrices of the tail. Dolphin Gull has a reddish bill, lighter mantle coloration, red legs, and long wings and tail, and it lacks white tips and mirrors to the primaries.

Dittmann and Cardiff (2006) agreed that the Colorado bird was indicative of Kelp Gull and noted that the Colorado bird was similar

to Louisiana's single Kelp specimen, which on P10 also had a tiny mirror on the right wing and a barely visible white patch on the left.

Alvaro Jaramillo stated "there is nothing I can see in this bird that suggests it is not a Kelp Gull." He did note that the bill size of the Colorado bird was not quite typical in being so large and deep-based. He did acknowledge, however, that it was within the range of variation of the species. He considered the red orbital ring and lack of head/neck streaking in basic plumage classic for the species.

Klaus Malling Olsen offered his opinion that the Colorado bird indeed looked like a perfect Kelp Gull. The heavy bill ruled out Lesser Black-backed Gull. Though both heavy bill and light eye are characters found in Great Black-backed Gull, that species would not display the combination of: 1) upperparts too black for Great Black-backed (blacker than in all but nominate *fuscus* and a few *intermedius* Lesser Black-backed Gulls); 2) almost solid black "hand," including too little white in the wingtip for Great Black-backed Gull; 3) a very broad white trailing edge to the secondaries, broader than in the primaries, and covering a larger area than in any of the other black-backed gull species; and 4) yellowish legs, which are very rare in Great Black-backed. It probably spent some time in the Northern Hemisphere, as the primary molt fits the schedule of Northern Hemisphere gulls, although differences in molt timing from what is expected have recently been documented as regular in stragglers (Olsen 2007).

Age

Dittmann and Cardiff (2006) judged that the Colorado gull was four years old based on the very small mirror present on the left P10 and lack of visible mirror on the right P10. The bird was molting from alternate to definitive plumage, as P1-5 were new, P6 was in active growth, P7 was missing/erupted, P8-10 were old, S1-2(3) were missing/erupted, and there was no observed tail molt. They felt that the reduced/absent mirror on P10 suggested immaturity and therefore maintained that the plumage best fit a fourth-year bird, although they acknowledged that some Kelp Gulls have advanced molt/maturation so the Colorado individual may in fact have been younger. Based on photographic review of the Colorado bird, they could not ascertain other characters of immaturity, such as dark marking in the upper primary coverts. The soft part coloration (especially leg color) indicated to them that the bird was at least sexually mature, which also suggests it was approximately four years old.

Though the CBRC will never know where the Colorado bird was hatched, if it was four years old during autumn of 2003, it most likely hatched in 1999.

Sex

Cardiff and Dittmann judged the Colorado Kelp Gull to be male based on the size and structure of the bill. The CBRC certainly agrees with that opinion and adds that the bird's bulkiness and flat-topped crown are also indicative of its being a male.

Subspecific Identification

Dittmann and Cardiff (2006) suggested that the pale iris of the Colorado bird possibly indicated it to be of the wide-ranging nominate subspecies (*L. d. dominicanus*).

Status and Distribution of Kelp Gull

The Kelp Gull is a mainly coastal, four-year gull widely distributed throughout the Southern Hemisphere (Harrison 1983) inhabiting seacoasts, estuaries, rivers, and lakes from sea level to 1,500 m (Banks et al. 2002). It is resident in South America from southwestern Ecuador and southeastern Brazil south to Tierra del Fuego; in Africa from central Namibia and eastern South Africa south to the Cape; in southern Australia; in New Zealand; and on islands in the southern oceans. Two subspecies are widely recognized. The nominate race of the Kelp Gull (*L. d. dominicanus*) occurs along the coasts of South America; Australia, where it overlaps with a somewhat similar species, the thicker-mandibled Pacific Gull (*Larus pacificus*); New Zealand, where it is known as the Southern Black-backed Gull; and many islands as well. The subspecies found along the southern African coastline, *L. d. vetula*, is sufficiently different from the nominate race that some consider it a full species (University of Cape Town, South Africa 2007). The differences between the two subspecies include *dominicanus* having usually smaller size, red orbital rings, light irides, thick white tips to mid-primaries, and yellower legs, compared to the orange-yellow orbital rings, dark irides, and greener legs of the larger *vetula* (Olsen and Larsson 2004).

The Kelp Gull is abundant and widely distributed in coastal Patagonia in South America and has increased in number at many locations during the last decade (Yorio et al. 1998). The species has also increased in distribution and abundance in New Zealand (Fordham 1970), South Africa (Steele and Hockey 1990), and Australia (Blakers et al. 1984).

Though generally coastal in distributive affinity, it is known to nest at continental wetlands away from the coast in Argentina (Yorio et al. 1998) and on remote plains in the Falkland Islands (IPCWG 2007). It ventures far inland in some parts of its range. For example, in New Zealand it occurs on lakes in the mountains and is widespread

as a scavenger in farmland; the population in the country is estimated at over one million birds. In Argentina, it occurs on large lakes in the Andes (University of Cape Town, South Africa 2007). Seasonal movements between coastal and non-coastal areas have been noted (Blanco et al. 1996).

As the species has increased in population in its core range, northerly range expansions have also occurred. In Africa, it is now casual north to Senegal, Kenya and Mauritania (Pineau et al. 2001). South American populations now erratically extend north to Central America and the Caribbean. In Panama, at least five birds were seen together at one time in 2001 (MDCRC 2003), while in the Caribbean, two adult birds were found in 2000 in Trinidad and Barbados (Lewis 2007). Records from the Gulf Coast arrived as early as 1987, when two were seen on the coast of Mexico's Yucatan Peninsula (ABA 1997). Records have occurred in the Yucatan since then, especially in 1991, 1993, and 1994 (Howell et al. 1993). In the central Pacific, one even reached Christmas Island in 1999 (Rauzon and Lee Jones 2005).

The U.S. history of Kelp Gull began in 1989 with the discovery of a territorial pair on Curlew Island, one of the Chandeleur barrier islands off the coast of Louisiana (Dittmann & Cardiff 2005). The following year, at least three birds were found on the Chandeleurs, including Louisiana's first records of inter- and intraspecific breeding. The pair of breeding Kelp Gulls remained at that location through 1994, when surveys revealed its presence as well as that of an additional pair. Nesting Herring Gulls (*Larus argentatus*) were also discovered, including Kelp x Herring first filial generation offspring. First filial generation (F1) refers to the progeny produced from a parental mating. The subsequent generation produced by the breeding the F1 offspring together is termed the F2 generation. Interbreeding the offspring of each generation will then result in F3, F4, F5 generations, etc.

Texas obtained its first and second records in 1996 with the presence of a pure adult at Galveston Island, found in January, that remained into April; the same bird returned to Galveston later in the same year, returning in November and wintering at that location until April 1997 (M. Lockwood, pers. comm.). The second Texas record was of a bird present on North Padre Island in May 1996 (M. Lockwood, pers. comm.). The first record away from the Gulf Coast was an adult observed in October 1996 at Hammond, Indiana on the south shore of Lake Michigan. Based on extensive study of documentations, photographs, references, and correspondence with experts, the Indiana Bird Records Committee concluded the bird to be phe-

notypically of pure heritage (Hess 2004). Between 1998 and 1999, another adult Kelp Gull was present in St. Mary's County, Maryland, and remained at that location until at least 2004 (Lewis 2007). After exhaustive analysis, the Maryland Bird Records Committee voted to accept the bird as pure and of wild provenance.

Meanwhile, back in Louisiana, surveys in 1998 revealed the presence of at least three remaining pure Kelp Gulls, of which one was collected and deposited at Louisiana State University Museum of Natural Science. During that year, up to 14 hybrid Herring x Kelp F1 and backcrosses were noted. In 1999, three pure Kelps were discovered on the Chandeleurs, including two newly detected birds, possibly the progeny of the original nesting pair. Up to eight different pure Kelp Gulls were known from Louisiana during the period 1989 – 1999. By 2000, however, only one pure Kelp Gull remained on the Chandeleurs (Dittmann & Cardiff 2005), and none have been recorded since (S. Cardiff, pers. comm.).

Critical Questions and Debates

Acceptance of a Southern Hemisphere bird from Colorado raises significant questions as to the validity of that decision, including provenance, potential for hybrid heritage, and molt cycle determination. Results of in-depth analysis and voter opinion on these key questions are presented below.

Captive vs. Wild Origin

When confronted with the question of whether a vagrant species was of captive or wild origin, bird records committees usually look at degree of tameness, feather wear, presence/absence of a leg band, and whether the bird is free-flying or shows signs of having had its wings clipped. The Colorado Kelp Gull exhibited plumage and behavior fully consistent with that of wild provenance, indicating that if it was captive, it had not been banded, had lost its dependence upon humans for sustenance, and had been "wild" for some time. To test that hypothesis, the CBRC is grateful to Rachel Hopper, who conducted a thorough review of the history of captive Kelp Gulls in the U.S. Results of her investigation are presented herein (Hopper 2006).

In 1983, Scott Dreichman, on behalf of Sea World, collected Kelp Gull eggs from Nelson Island, part of the South Shetland island chain north of the Antarctic Peninsula in the Southern Ocean. To Scott's knowledge, these eggs were the first ever brought into the United States. All of these eggs were hatched and the chicks hand-reared by Sea World. From this initial stock, nine Kelp Gulls remain to date

in public collections, all the rest having died in captivity or being accounted for by Sea World. None of the original birds was ever bred or loaned out.

Sea World of Orlando, Florida currently has three Kelp Gulls in a totally enclosed exhibit. These birds are all over 20 years old, free-flying, and banded. There have been no escapes from this facility. Sea World of San Antonio, Texas currently has two Kelp Gulls. These birds are both over 20 years old, free-flying, and banded, and there have been no escapes from this facility. In 1996, Sea World of San Diego, California had four Kelp Gulls. These were all free-flying, banded birds. In 1996, those gulls were donated to the John Ball Zoological Gardens in Grand Rapids, Michigan.

The four Kelp Gulls at the John Ball Zoological Gardens are, as with all other Kelp Gulls derived from the original egg collection, over 20 years old, and remain free-flying and banded. One of these birds briefly escaped the exhibit in 1996 by walking out an open door and onto the grounds of the zoo. The bird was immediately caught and no other birds have escaped since.

In a Decision Summary written by Paul O'Brien and Phil Davis in November of 2003 (MDCRC 2003), the Maryland/District of Columbia Records Committee referred to a Kelp Gull with an unknown subspecies background. This bird was acquired by the Louisville Zoo in Kentucky in 1969 from an importer in Miami, Florida. The bird died in 1992 after producing a hybrid offspring with a captive Ring-billed Gull in 1987. The hybrid was subsequently taken by a Great Horned Owl (*Bubo virginianus*). The importer of the Kelp Gull is now deceased and attempts by the Maryland/District of Columbia Bird Records Committee failed to acquire any additional information on that import. To our knowledge, this is the only known captive Kelp Gull on record in the U.S. that did not originate from the initial Sea World collection.

The Federal Register has an extensive website including searchable archives from 1995-2006. Among their archived documents are requests for permits for the importation of wild birds from Antarctica under the "Notice of Permit Applications Received Under the Antarctic Conservation Act of 1978 (Pub. L. 95-541)". The National Science Foundation is the agency responsible for receiving and granting all such permits. A search of that entire database revealed that in 1997 there was a single request to "take" or "salvage" up to three Kelp Gulls from Antarctica to be brought into the United States as specimens for educational purposes. There were two requests for permits to sample the tissue and blood of Kelp Gulls in Antarctica, and one to capture and release Kelp Gulls for a scientific study in Antarctica.

No permits were requested for the importation of live Kelp Gulls or Kelp Gull eggs into the United States during that time period.

In regards to private collections, Sherry Branch, the Curator of Birds at Sea World Orlando and the "Avian List Tag" Chair for a group of bird curators throughout the country, is in touch with most private individuals with major bird collections in the United States and has never heard of or encountered a private collector with a Kelp Gull. Likewise, Scott Dreichman (the original Kelp Gull egg collector on Nelson Island) owns Wildlife Concepts International, a business that helps zoos, aquaria, and private collectors acquire and manage penguin collections. He deals extensively with private collectors and states that he as well has never encountered a private collector with a Kelp Gull.

The Louisiana Bird Records Committee accepted the origin of their birds as 'natural' based on recent patterns of expansion and posited that a captive origin did not seem probable for the occurrence of Kelp Gulls on Louisiana's barrier islands (Dittmann and Cardiff 2006).

Based on this extensive analysis and the fact that no captive Kelp Gulls are known to have escaped, it was the opinion of CBRC members that the Colorado gull was wild and unassisted by humans.

Molt Cycle

Molt timing is determined by hormonal changes linked to photoperiod. Increased daylight in spring induces most bird species to molt from basic to alternate plumages. Likewise, in late summer and autumn, decreased daylight prompts birds to molt from alternate back to basic plumages. This is true for Northern and Southern Hemisphere species of birds (McWilliams 2007). Since molt timing is determined by environmental factors rather than genetics, the timing of those molts is dependent upon which hemisphere the bird is actually in, rather than the one in which it originated. Southern Hemisphere birds begin molt from basic to alternate in our autumn (their spring) and subsequently begin molt from alternate to basic in our spring (their autumn). When confronted with a bird that began its life with a Southern Hemisphere molt cycle, one must consider whether the bird still retains that molt cycle or has adapted that cycle to conform with northern latitudes. It has been postulated that a Southern Hemisphere-bred vagrant may take a year or two in northern latitudes to adapt to a Northern Hemisphere molt cycle (Olsen 2007). In the context of the Colorado gull, if the bird exhibited a Southern Hemisphere molt cycle, it would suggest that the bird was hatched in that latitude. All Louisiana Kelp Gulls were on a Northern Hemisphere

molt schedule (Dittmann and Cardiff 2006), being in full alternate plumage April-June. Onset of body and primary molt began in mid-June, and therefore corresponded to their breeding cycle. Texas Kelp Gulls, as well as those on the Yucatan Peninsula, were also believed to be on a Northern Hemisphere molt schedule (Dittmann & Cardiff 2006).

The Colorado Kelp Gull displayed active flight feather (primary/secondary) molt. In Northern Hemisphere birds, flight feather molt occurs in late summer and can continue through fall. The flight feathers are the last to be molted during a molt cycle. The inner primary molt on the Colorado bird is indicative of the bird being on a northern molt cycle, suggestive that the bird was either hatched in the Northern Hemisphere or had at least been here for a few years. If the bird still retained a Southern Hemisphere molt schedule, it would not exhibit inner primary molt until roughly April.

Hybridization

The CBRC acknowledges that it cannot prove with certainty that the Colorado Kelp Gull did not possess mixed species heritage. Our decision to accept it as pure was based on detailed analysis of phenotypic traits available for observation as well as expert opinion. Our decision begs the question, however, "How can birders or scientists confirm with 100 percent accuracy that an individual is of pure pedigree?"

Regarding potential hybrid combinations that should be analyzed in the case of the Colorado subject, we focused only on Herring Gull x Kelp Gull pairings, as that combination is the only cross-breeding combination involving Kelp Gull in the Northern Hemisphere. The CBRC looked at pairing combinations of F1, F2, and F2 backcrosses with Kelp.

Herring x Kelp F1 offspring appear generally intermediate between the parental species (Dittmann and Cardiff 2005). Offspring of such pairings have gray mantles and inner wings contrasting with black wingtips, unlike the jet black mantle of the Colorado bird. Dittmann and Cardiff (2005) go on to note that in flight, F1 birds are similar to many Lesser Black-backed Gulls or Yellow-footed Gulls in primary pattern and dorsal coloration. All primaries on those offspring are also white tipped, unlike those of the Colorado bird. By virtue of the dark flight feathers on those offspring, the upper primary coverts look relatively dark in comparison to the white underwing linings, but they contrast with the blacker outer primaries. This contrast is a good mark separating this hybrid type from Kelp Gull, which has blacker dorsal coloration and shows less contrast with the outer primaries.

In addition, the parallel-edged commissure of the bill was quite unlike the slightly decurved, slightly drooped bill of Herring Gull. One would speculate that a Herring x Kelp would display a bill shape intermediate between the two species.

Further hybrid matings of all other hybrid offspring with each other (F1 x F1, F1 x F2, etc.) apparently grade more and more toward Herring-type birds or simply birds with various degrees of gray mantles and inner wings contrasting with black outer primaries, which differ from those of the Colorado gull.

The difficulty in disproving hybridization with the Colorado gull would be Kelp x F1 hybrid backcrosses, and (even more problematic) matings involving Kelp with post-F1 birds. According to Dittmann & Cardiff (2005), specimens of those Kelp x F1 hybrid backcrosses express mantles almost as dark as pure Kelp and may actually fall within the normal range of mantle color variation of a pure bird. Progeny of Kelp and post-F1 hybrids, especially those post-F1 hybrids that backcrossed with F1s, could conceivably be virtually identical phenotypically to a pure Kelp Gull.

Expert opinion on the Colorado gull could not positively state that the bird was not of hybrid origin, and hybrid origin cannot be completely ruled out, considering we will never know the DNA composition of the bird. Dittmann and Cardiff (2006) asked, "Is the CO 'Kelp' actually a hybrid?" Their answer was possibly, but if it was, it was one of relatively few individuals produced by Louisiana Kelp X F1 pairs. In this case, they maintained that it seems pretty clear that the Colorado individual was a pure Kelp or a Kelp backcross hybrid. They went on to say that the bird appeared to be a pure Kelp Gull based on mantle coloration, since the photos supported the bird's being dark enough to be a pure Kelp Gull, acknowledging, however, that hybrids can appear that dark. They noted that there are many factors to consider in addition to apparent morphology. They believed that the probability that it was one of Louisiana's Kelp x Herring hybrids seemed remote because of the small population size of that state's hybrids and Kelps. Klaus Malling Olsen stated that the bird should be identified as what it looks like. In this case, he saw nothing wrong for Kelp Gull. He maintained that the different molt from what would be expected is explained by the bird having adopted a Northern Hemisphere molt cycle, probably after having spent some years here. He indicated that with gull identification, there is a trend toward not being able to identify anything for sure. But he felt that to argue that the Colorado bird was a (probably multigenerational) backcross hybrid, there should at least be evidence supporting the idea. Judging from the photos, Olsen found no such evidence.

Thus, empirical evidence supports the idea that the Colorado Kelp Gull was pure; however, we will never be able to prove that assertion as no data exist to disprove the alternative hypothesis. The CBRC decision, however, is consistent with those in all other states that have records of Kelp Gull. Unless or until additional information becomes available on provenance and characteristics of hybrid pairings of Kelp and Herring Gulls in North America, the CBRC is forced to evaluate this record based solely on phenotypic attributes of the bird. Bird Records Committees are limited to the use of field ornithology to identify species.

The use of DNA sequencing is not an option in this case, and even if we were able to procure genetic material from the bird, MtDNA analysis only looks at maternal inheritance and not the complete genetic makeup of the bird in question. Thus even if MtDNA analysis showed the mother of the bird to have been a pure Kelp Gull, we still would not know what the father was. It is the role of Bird Records Committees to form a consensus on the identity of a bird based on the best current knowledge showing that a given bird fits the characteristics of a named population; such is the case with the Colorado Kelp Gull. It was the opinion of all seven members of the CBRC that the bird exhibited true Kelp Gull characteristics and there was no indication that there was hybridization involved. Experts within the field suggest that it was, indeed, a pure Kelp Gull, but as a matter of prudence, acknowledge that without DNA, they cannot tell for sure. The preponderance of evidence in this case indicates Kelp Gull and no expert testimony provided evidence leading to reasonable doubt. If the Committee shifts its methods to require absolute proof of a species' heritage, then it would have to reconsider many records currently on the official list, including those of both Blue-winged and Golden-winged warblers (*Vermivora pinus* and *V. chrysoptera*), Glaucous-winged (*L. glaucescens*), Thayer's (*L. thayeri*) and many other gulls, and, in fact, all species that have proven to hybridize with another species (which is not an inconsequential number).

Interior Vagrancy

One may argue that there is no clear interior pattern of vagrancy for Kelp Gull. For the most part that is true, as Kelp Gull is mainly coastal. However, Indiana's accepted record was certainly not coastal in the sense of being marine. Furthermore, as noted earlier in this document, the species does wander inland within its normal range. In addition, recent records of Streaked Shearwater and Lesser Frigatebird in Wyoming (Faulkner 2006a, 2006b) demonstrate remarkable evidence of vagrancy patterns previously unknown within this

region. When considering inland vagrancy, one must also remember that Kelp Gulls are very rare in North America. There has been little chance to develop a pattern of vagrancy due to the limited population size.

Documenting Observers

The CBRC graciously appreciates documentation of the Colorado Kelp Gull offered by the individuals listed below. To remain consistent with previous CBRC reports, the names of the finders of the bird are underlined and are presented first; additional contributors' names follow in alphabetical order by surname. Observers submitting a photograph have a dagger (†) behind their names.

Hugh & Urling Kingery, Peter Gent, Rachel Hopper (†), Tony Leukering (†), Bill Maynard (†), Nathan Pieplow, Bill Schmoker (†), and Andrew Spencer (†).

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