

- populations in Britain. *Ibis* 130: 221–233.
- Ogilvie, M., & the Rare Breeding Birds Panel. 2002. Rare breeding birds in the United Kingdom in 2000. *Brit. Birds* 95: 542–582.
- & —. 2003. Rare breeding birds in the United Kingdom in 2001. *Brit. Birds* 96: 476–519.
- Oring, L.W., & Lank, D.B. 1984. Breeding area fidelity, natal philopatry, and the social systems of sandpipers. In: Burger, J., & Olla, B.L. (eds.), *Behavior of Marine Animals. Vol. 5. Shorebirds: breeding behavior and populations*: 125–147. Plenum Press, New York.
- Payne, L.X., & Pierce, E.P. 2002. Purple Sandpiper. In: Poole, A. & Gill, F. (eds.), *The Birds of North America*, No. 706. The Birds of North America Inc., Philadelphia.
- Pierce, E.P. 1997. Sex roles in the monogamous Purple Sandpiper *Calidris maritima* in Svalbard. *Ibis* 139: 159–169.
- Rae, R., Nicoll, M., & Summers, R.W. 1986. The distribution of Hardangervidda Purple Sandpipers outwith the breeding season. *Scott. Birds* 14: 68–73.
- Smith, R.D., & Marquiss, M. 1994. Breeding seasons and nesting success of Snow Buntings in north-east Scotland. *Scott. Birds* 17: 223–234.
- Soikkeli, M. 1967. Breeding cycle and population dynamics in the Dunlin (*Calidris alpina*). *Ann. Zool. Fenn.* 4: 158–198.
- Spencer, R., & the Rare Breeding Birds Panel. 1991. Rare breeding birds in the United Kingdom in 1989. *Brit. Birds* 84: 349–370, 379–392.
- Summers, R.W. 2002. Purple Sandpiper. In: Wernham, C.V., Toms, M.P., Marchant, J.H., Clark, J.A., Siriwardena, G.M., & Baillie, S.R. (eds.), *The Migration Atlas: movements of the birds of Britain and Ireland*: 303–305. Poyser, London.
- & Nicoll, M. 2004. Geographical variation in the breeding biology of the Purple Sandpiper *Calidris maritima*. *Ibis* 146: 303–313.
- , — & Peach, W. 2001. Numbers, migration phenology and survival of Purple Sandpipers *Calidris maritima* at Gourdon, eastern Scotland. *Bird Study* 48: 139–146.
- , Corse, C.J., Nicoll, M., Smith, R., & Whitfield, D.P. 1988. The biometrics and wintering area of Icelandic Purple Sandpipers. *Ring. & Migr.* 9: 133–138.
- Swanberg, P.O. 1945. Om skärnsnäppan, *Calidris m. maritima* (BRÜNNICH), i de svenska fjällen och dess häckningsbiologi. *Fauna och Flora* 40: 154–169.
- Tomkovich, P.S. 1985. Sketch of the Purple Sandpiper (*Calidris maritima*) biology on Franz Josef Land. *Ornitologiya* 20: 3–17.
- Väisänen, R.A., Hildén, O., Soikkeli, M., & Vuolanto, S. 1972. Egg dimension variation in five wader species: the role of heredity. *Ornis Fenn.* 49: 25–44.

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365. Purple Sandpiper *Calidris maritima*, Scotland, June 2004.

Derek McGinn

Discovering the breeding grounds of Ross's Gull:

100 years on

Henry A. McGhie and Dmitri V. Logunov



366. Ross's Gull *Rhodostethia rosea*, near the Indigirka River, northeast Siberia, June 1999. Chris Schenk

ABSTRACT June 2005 marked the centenary of one of the most notable events of twentieth-century ornithology: the discovery of the breeding grounds of Ross's Gull *Rhodostethia rosea*, in northeast Siberia, by Russian ornithologist Sergei Buturlin. News of the discovery was announced in Britain to a meeting of the British Ornithologists' Club on 13th December 1905 by Henry Dresser, Buturlin's long-term correspondent. This article provides details on Buturlin's famous discovery and investigates the relationship between Buturlin and Dresser. Previously unpublished photographs of Buturlin and his expedition are presented, together with new information extracted from correspondence between Dresser and Buturlin that is preserved at the Museum of Local Lore, History and Economy in Ulyanovsk, Russia, which houses the largest surviving archive on Buturlin.

Ross's Gull *Rhodostethia rosea* is surely one of the world's most beautiful gulls. Following its discovery in June 1823, it became surrounded by an almost mystical aura; its extreme rarity and ethereal beauty combined with the harsh and remote environment where it occurred to make it one of the most highly prized trophies of the nineteenth century naturalist-collectors. It was named in honour of the famous Arctic explorer, James Clark Ross (1800–62), who shot the first specimens on the tiny island of Igloodik, in the Fury and Hecla Strait (separating the Melville Peninsula and Baffin Island, in Canada), while on an expedition in search of the Northwest Passage under the command of Captain W. E. Parry. Following its discovery, and until the end of the nineteenth century, the species was encountered only occasionally by polar explorers, and was represented in museum collections by fewer than half a dozen specimens. Inevitably, it became an object of fascination and desire for naturalists and collectors alike. Romantic stories of exploration and hardship ensured that the species' reputation remained aristocratic (Densley 1999). When De Long's ship *Jeanette* sank after two years drifting in the ice on a quest to reach the North Pole, Raymond Newcombe, the ship's naturalist, displayed uncommon valour in saving three skins of this rare bird under his shirt. Parts of the *Jeanette* were later discovered 3,000 km away on the

coast of southern Greenland. This inspired the Norwegian explorer Fridtjof Nansen to embark on an incredible journey with his ship, the *Fram*, which was deliberately allowed to become ice-bound during his attempt to reach the North Pole. During this epic journey, Nansen encountered Ross's Gulls flying north near the New Siberian Islands, Russia, and noted:

This rare and mysterious inhabitant of the unknown north, which is only occasionally seen, and of which no one knows whence it came or whither it goeth, which belongs exclusively to the world to which the imagination aspires, is that I have always longed to discover. (see Potapov 1990)

Buturlin and his expeditions

Sergei Alexandrovich Buturlin (plate 367) was one of the most eminent and influential Russian ornithologists, whose scientific achievements 'go far beyond the limits of what a scholar is usually able to succeed' (Dement'ev 1938). Buturlin was born in 1872 in Montreaux, Switzerland, into a distinguished and noble family. His father, the son of a general and rich landlord, was well educated and a close friend of Leo Tolstoy for over 30 years (Kozlova 2001), while his mother was descended from a Polish family (Borodina & Gromova 2002). Buturlin graduated with a Diploma in Law from the Higher School of Jurisprudence, St Petersburg, in 1895, then went on to become a Justice of the Peace in Wesenberg (now Rakvere), Estonia. After the October Revolution in 1917, he moved to Moscow, where he worked in various government commissions on natural resources and agriculture (Sudilovskaya 1973). Here he remained until his death in 1938.

Although he did not receive any formal training in the biological sciences, Buturlin was an extraordinarily talented ornithologist and left a tremendous scientific legacy. During the period from 1888 until 1936, he published some 2,000 papers, articles and notes, and over 20 books covering a range of subjects including zoology, ballistics and hunting practice (Kozlova 2003). According to Potapov (1990), some 40% of the content of the journal *Messenger Ornithologique*, published in Moscow between 1910 and 1927, consisted of Buturlin's contributions, including numerous papers and comments. During his scientific career, Buturlin described 202 new species and subspecies, 15 genera and subgenera and two subfamilies of



367. Sergei Buturlin, photographed in 1906, when serving as a High Court Judge in Wesenberg.

birds (Dement'ev 1938). His most significant contribution was his four-volume *Complete Identification Guide to the Birds of the USSR*, published in stages between 1934 and 1941, which was jointly written with his student G. P. Dement'ev (Ruzskii 1938; Kozlova 1996). Buturlin combined interests in ornithology, collecting and hunting, which resulted in seven monographs on ballistics (Buturlin 1985), of which two are especially well-known: the two-volume monograph *Firing with Bullet* (1912–13) and *Fowling-piece and Firing It* (1915).

Buturlin's interest in ornithology inspired him to explore the vast regions of Russia, resulting in at least eight collecting expeditions. The first of these took him to the Volga basin and the Baltic Sea in the 1880s, while still surprisingly young for such ventures. In 1900 and 1902, he travelled to the remote islands of Kolguev and Novaya Zemlya in the Barents Sea. These expeditions were followed, in 1905–06, by one that took him to Yakutia and the Kolyma in northeastern Siberia, which was to result in his most celebrated achievement. He made later expeditions to the cis-Altaiian steppes of western Siberia in 1909, to the Chukchi Peninsula in 1925 and, last of all, to the Archangel Region in 1936, only two years before his death (for detailed accounts of these expeditions, see Dement'ev 1938 and 1948, Kozlova 2001, and Borodina & Gromova 2002). The Kolyma expedition of 1905–06, during which the breeding grounds of Ross's Gull were discovered, earned Buturlin worldwide acclaim, although few realise that this discovery was an accident. Buturlin had been commissioned by the Russian government to set up a state supply

system to the Kolyma region, where the previous system had been destroyed during the Russian–Japanese war. Buturlin was, at this time, a High Court Judge and not a professional ornithologist. Before his journey, he contacted the Imperial Academy of Sciences in St Petersburg and requested materials with which to form natural history collections. His request was favourably received, and his supplies were sent to the remote Kolyma region ahead of him so that they were ready to be collected on his arrival in the summer of 1905.

The 1905–06 expedition

Buturlin departed from St Petersburg on 20th January 1905, accompanied by two assistants, I. A. Shul'ga and E. P. Rozhnovskii (Buturlin 1906b). The party travelled via Irkutsk, which they left on 22nd February, and arrived at Yakutsk, 2,500 km away, on 9th March. It took them a further month to travel from Yakutsk to Srednekolymsk on the Kolyma River, a distance of over 3,000 km, using teams of horses and dogs (Uspenskii 1973). Buturlin subsequently described his journey to the Kolyma in three short papers (Buturlin 1906a), of which the first was written when Buturlin was still staying in the Kolyma, full of the excitement and atmosphere of his trip:

I crossed and re-crossed the delta by means of dogs during the first half of May, when it was in the depth of winter from a European point of view; heavy snowstorms then occurred daily and lasted all day long.

Buturlin set up camp on 8th May in the small village of Pokhodsk, by the Kolyma River, a settlement founded by orthodox Old Believers (plates 368 & 369) in the time before Peter the



368. Pokhodsk village, with the Kolyma River in the background, photographed during Buturlin's 1905–06 expedition.



369. 'NE Siberia, tundra E from the mouth of Kolyma, a Chukchi's family', photographed during Buturlin's 1905–06 expedition.

Great (Potapov 1990). He also spent a week at the remote Sukharnoe village, studying the techniques used by the local seal hunters. The temperature at the time ranged between -10°C and -18°C , although at times the ice melted during the day and froze again at night, so that the party was forced to travel at night. In 1905, the ice began breaking up on the Kolyma River on 25th May, and continued to flow for over a week. Some of Buturlin's companions also spent time collecting elsewhere, on the nearby Ola and Alazeya Rivers (Buturlin 1906b).

Densley (1999), in his excellent monograph on Ross's Gull, quotes part of a beautiful passage from Buturlin, describing how he first saw the birds on the Kolyma:

I went to the river – where the fathom-thick ice was still quite safe – and came across several dozens [of Ross's Gulls]. The sun was shining brightly, and in the distance each pair appeared like so many roseate points on the bluish ice of the great stream... The place was full of life when undisturbed; plenty of geese, some swans, flocks of Scaup [*Aythya marila*], and Long-tailed Duck [*Clangula hyemalis*], pairs of Baikal Teal [*Anas formosa*], clouds of both species of phalarope [*Phalaropus lobatus* and *Ph. fulicarius*], mixed parties of Bar-tailed Godwit [*Limosa lapponica*] and Grey Plover [*Pluvialis squatarola*], Spotted Redshank [*Tringa erythropus*], Broad-billed Sandpiper [*Limicola falcinellus*], Temminck's Stint [*Calidris temminckii*], Curlew Sandpiper

[*C. ferruginea*], Dunlin [*C. alpina*], Pectoral Sandpiper [*C. melanotos*], and Sharp-tailed Sandpiper [*C. acuminata*] were constantly to be seen at or near it, in company with lively Black-capped Terns [Arctic Terns *Sterna paradisaea*] and flocks – mournful and silent – of Sabine's Gulls [*Larus sabini*]. (Buturlin 1906a)

In the boggy alder scrub and tundra, Buturlin discovered three breeding colonies of Ross's Gull. He thus earned himself the great honour of being the first person to observe and describe the breeding habits, habitats and some aspects of migration of this most beautiful bird.

Many ornithologists had expected the nesting grounds of Ross's Gull to be found in the barren, high Arctic tundra, so Buturlin's discovery of the first nests in the southern tundra zone, among thickets of willow *Salix*, birch *Betula* and alder *Alnus*, came as a complete surprise. Densley (1991) provided a detailed account of a well-studied breeding colony on the tundra of the lower Kolyma River, c. 140 km to the northwest of Cherskiy. In this region, Ross's Gulls nested in small, scattered colonies, often alongside Arctic Terns, which provided protection from marauding Vega Gulls *Larus argentatus vegae*. Other predators in the nesting area included Arctic *Stercorarius parasiticus* and Long-tailed Skuas *S. longicaudus*, Peregrine Falcons *Falco peregrinus* and Arctic Foxes *Vulpes lagopus*.

The study colony was located in a marsh on



370. Adult Ross's Gull *Rhodostethia rosea* near the settlement of Chokurdakh, on the lower Indigirka River, northeast Siberia, June 1994.

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open tundra, approximately 1.0–1.5 km in diameter, and comprised numerous water-filled polygons (the surface of periglacial areas is often characterised by the presence of ground materials arranged in a variety of symmetrical geometric shapes, such as polygons) and a small elliptical-shaped lake, 200 m in length and 100 m wide. The dominant vegetation was Water Sedge *Carex aquatilis*, which grew on ridges formed by ice polygons, while towards the edges and on the drier ridges, various grasses (Poaceae), willows including Tealeaf Willow *Salix pulchra*, Dwarf Birch *Betula nana*, Marsh Cinquefoil *Potentilla palustris* and the lousewort *Pedicularis sudetica* grew. Within the marsh and, in particular, in the wet sedge preferred by Ross's Gulls, numerous waders were also nesting, including Pectoral Sandpiper, Ruff *Philomachus pugnax*, Common Snipe *Gallinago gallinago*, Long-billed Dowitcher *Limnodromus scolopaceus*, Spotted Redshank, Wood Sandpiper *T. glareola* and Red-necked Phalarope.

In 1990, the study colony comprised 23 pairs, which were breeding in small discrete groups throughout the marsh, although in previous years, numbers here varied between 10 and 17 pairs. This compares with colony sizes of 10–12 pairs noted by Buturlin (1906a). Adult Ross's Gulls return to the breeding colonies in late May, and the first eggs are usually laid between 4th and 9th June (earlier in warm springs, later if the weather is particularly inclement). The preferred nest-sites are either on small islands in water-filled ice polygons, or in damp areas of marsh within 1.5 m of the margin of a lake or pool. Two or three eggs are laid in a nest, which is merely a shallow hollow in the *Sphagnum* lined with dead leaves and stems of Water Sedge. Hatching occurs in late June, typically 19–20 days after laying, and by the time the eggs hatch, the surrounding vegetation has grown high enough for the chicks to be able to hide in it. Two weeks after hatching, chicks achieve their maximum weight of c. 170 g, when they exceed the weight of the adults. Chicks remain in the vicinity of the breeding colony for up to four weeks after hatching, during which time the juvenile plumage replaces the hatching down. Chick mortality is heavy, with many lost to predators, while cold and wet conditions also take a heavy toll. Densley estimated that, in 1978, a climatically favourable year, chick mortality was 63%. In cold springs, such as that of 1979, many



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371. Henry Dresser, photographed around 1880–90.

adults do not even lay eggs (and only seven young fledged from 29 eggs laid that year). Dispersal from the breeding colonies takes place from late July, with the first birds appearing at Point Barrow, Alaska, in mid August.

Collaboration with Henry Dresser

Dresser was one of the most prominent of the wealthy nineteenth-century ornithologist-collectors, and had led a most adventurous life (plate 371). He could speak many of the major European languages (although not Russian). Like Buturlin, he produced an enormous body of work, most notably the *History of the Birds of Europe*, issued in 84 parts over a decade (1871–81). Dresser also had an extensive network of ornithological correspondents throughout Europe and the British Empire, built up largely through his business as a timber and iron merchant.

Buturlin and Dresser first met in 1903 at Buturlin's home at Wesenberg, although they had been in correspondence since the 1890s. Dresser wrote to Buturlin from London in February 1903:

... is there a chance to get a carriage or a horse as I am a lame man: I used to sleep outside without a duvet quite often. At that time I got cold legs and can't walk quickly. But as I used to be a good rider in the past, I ride on four legs better than walk on two.

I am very keen to meet with you and become acquainted with you.

Dresser and Buturlin collected eggs together on some islands in the Gulf of Finland, and visited Baron Harald Loudon, a pioneer in migration studies. They maintained a stream of correspondence between 1903 and 1911, discussing questions of taxonomy and distribution. At Buturlin's request, Dresser inspected bird specimens held in the collection at the British Museum (Natural History), London, and provided him with taxonomic assessments on various specimens, especially pheasants (Phasianidae), ducks (Anatidae) and woodpeckers (Picidae), in which Buturlin was particularly interested.

Buturlin became Dresser's main correspondent in Russia in the early twentieth century, and he provided Dresser with unique notes on the distribution of birds within Russia, many of which were incorporated in the *Eggs of the Birds of Europe* (Dresser 1909–10). These notes, amounting to c.100 sheets in total, are deposited in the Dresser Archive in the Manchester Museum.

Publication

Buturlin returned to Moscow after the Kolyma expedition in January 1906, the journey back having taken three months, during which he lost two toes through frostbite. He had written

to Dresser from Pokhodsk, informing him of the discovery of the breeding grounds of Ross's Gull, and providing notes on the area. Dresser announced Buturlin's discovery at a meeting of the British Ornithologists' Club (BOC), held at the Restaurant Frascati in Oxford Street, London, on 13th December 1905, confirming that Buturlin had sent full particulars of his discovery, which would be published in the *Ibis*. The first instalment of this three-part paper was already published by the time Buturlin reached Moscow. The second part appeared in April 1906, followed by a short correction, and the final part was published in July 1906. As a result of his observations and discoveries, particularly those of Ross's Gull, Buturlin was elected as a Foreign Member of the BOU in May 1906.

Although Dresser had announced the discovery in December 1905, it was not until April 1906 that Buturlin received his first eggs from Siberia. These he sent to Dresser to be exhibited to the avaricious members of the BOC, many of whom were egg-collectors. Dresser wrote a short paper in the *Ibis* (Dresser 1906), in which he described the eggs of Ross's Gull as 'undoubtedly the first authentic eggs of this species that have yet arrived in Europe'. Details of the breeding habits were also published in the *Ibis* (Buturlin 1907a), and included an illustration of the chick. Buturlin subsequently republished his main paper in German and Swiss journals (Buturlin 1908, 1912), the 1912 paper being accompanied by photographs.

Buturlin also sent a number of specimens of other species to Dresser, which he believed represented undescribed races, to be exhibited to the BOC. These were rejected as representing new forms by Ernst Hartert, then curator of the Walter Rothschild collection at Tring, so he described them in the German journal *Ornithologische Monatsberichte* (Buturlin 1907b). He also sent specimens of several rare, little-known and

interesting forms to Dresser, details of which were published in *Ibis*. These included Spectacled Eider *Somateria fischeri* (Dresser 1908), Asian Dowitcher *Limnodromus semipalmatus* (Buturlin 1909, Dresser 1909a), and even Slender-billed Curlew *Numenius tenuirostris* (Dresser 1909b). In spite of being associated mainly with birds, Buturlin later published a book on the mammals he had seen on the Kolyma expedition (Buturlin 1913).

Specimens

The collections made on the Kolyma expedition were enormous; 2,000 bird skins, 500 clutches of eggs, over 4,000 insects, 2,000 herbarium sheets and some ethnographic collections were brought back (Kozlova 2001). Buturlin and his collaborators worked in a small hut, preserving skins; a photograph taken inside the hut and showing some of the specimens collected on the trip is preserved in the Manchester Museum (plate 372). Buturlin (1906b) recorded that he had collected no fewer than 38 skins and 36 eggs of Ross's Gull up to 23rd June 1905, and he undoubtedly collected more. The majority of Buturlin's Ross's Gull specimens went to the Zoological Museum of Moscow University, which still retains 24 skins. Of the remainder, most of the specimens and eggs were sent to Dresser in London, who sold them on Buturlin's behalf to his fellow collectors. Skins and eggs were sold for £5.00 each (around £300.00 at today's prices). There was a rumour (based upon a note in the R. Hay Fenton collection, held at Aberdeen University) that a bounty of £100.00 had been offered by the Smithsonian Institution, in Washington, for specimens. Although unfounded, this story serves to illustrate the mystery which surrounded Ross's Gull at that time. Many of these specimens did, however, end up in well-known collections: the Royal Scottish Museum (now National Museums Scotland) in Edinburgh purchased one skin from Dresser; Aberdeen University bought two; the Swedish Museum of Natural History, Stockholm, has three; and Harvard University, Cambridge, Massachusetts, has one. In addition, the Museum of Local Lore, History and Economy in Ulyanovsk, Russia, contains four Ross's Gull skins from Buturlin's collection.

Other collectors evidently continued to desire specimens of Ross's Gull, as Dresser asked Buturlin, in 1907 and 1909, whether he

could obtain any more specimens. Eggs from Buturlin are currently found in Aberdeen University, World Museum Liverpool, Cambridge (UK), NHM (Tring), Oxfordshire Museums, the Swedish Museum of Natural History, Stockholm, the Smithsonian Institution, Washington, and Cambridge, Massachusetts. There are no eggs in the Manchester Museum, and it is unclear whether they were dealt away by Dresser or removed from the collections sometime prior to 1975.

Buturlin's main ornithological collections and archives were lost during the Russian October Revolution in 1917 and subsequent civil war. Some are still in existence, however, shared between the Ulyanovsk Museum of Local Lore, History and Economy, which holds 421 of his bird study skins and his main archive containing c. 6,500 items (Borodina & Gromova 2002), and the Zoological Museum of Moscow University, which holds 6,420 bird study skins, mostly from Yakutia (Sudilovskaya 1973; Borodina & Gromova 2002). A small collection of birds, some books and manuscripts are kept in the University of Tartu, Estonia (Kozlova 2001). The Swedish Museum of Natural History, Stockholm, and the University of Amsterdam Museum both have small collections of specimens from Buturlin, including some type specimens, and Bergen Museum, Norway, has a small number of specimens. The Manchester Museum appears to have the largest collection of specimens from Buturlin in Britain, holding approximately 65 specimens collected by Buturlin himself, mainly on the Kolyma expedition, and a small number of additional specimens received through Buturlin.

The century since discovery

Since the discovery of the first nest, additional colonies of Ross's Gulls have been discovered in Arctic Siberia, along the Alazeya, Indigirka, Yana and Lena Rivers (Dement'ev & Gladkov 1969; Degtyarev *et al.* 1987; Densley 1991), and the breeding population is estimated to be in the region of 45,000–55,000 adults (Degtyarev 1991). Occasional breeding has occurred west to the Taimyr Peninsula (Pavlov & Dorogov 1976; Yésou 1994) and east to the Chaun River delta (Pearce *et al.* 1998), but these attempts seem to have been erratic and opportunistic. More surprisingly, there have been breeding attempts beyond Siberia, at Isfjorden, Spits-



372. Photograph of the inside of Buturlin's hut in the Kolyma delta, 1905, showing, on the table and windowsill, the birds collected on his trip; marked on reverse by Buturlin 'NE Siberia, Kolyma's delta, vil. Pokhodskoe, 69°7'N, a room, where we prepared bird skins. Near the window four skins of adult *Rhodost. Rosea*, and four of their pulli. The photograph shows stuffing material and preserving spirits.



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373. Water-filled ice polygons and thaw lakes on the lower Kolyma River, northeast Siberia, June 1994. Ice polygons are formed by the continuous freezing and melting of the Arctic ice, and form the marshes that are the preferred habitat of Ross's Gulls *Rhodostethia rosea*. Although small breeding colonies of up to 30 pairs are widespread throughout this region, the remote nature of the Arctic tundra renders them largely inaccessible.

bergen, in 1955 (Lovenskiold 1964), at Disko Bay on the west coast of Greenland in 1979 (Kampp & Kristensen 1980), and at Peary Land, Greenland, in 1980 (Hjort 1980). Three pairs were discovered near Devon Island, Nunavut, Canada, in 1976, and increased to six pairs in 1978 (MacDonald 1978). In summer 1980, three pairs were found at Churchill, Manitoba, the first documented breeding on the North American mainland (Chartier & Cooke 1980).

Most recently, a breeding pair was discovered on Prince Charles Island, Nunuvak, in July 1997, only about 200 km from the spot where Ross shot the type specimen in June 1823 (Béchet *et al.* 2000).

Where Ross's Gulls disappear to when they leave the breeding sites remains almost as much of a mystery today as it was 100 years ago. An annual passage of adults and juveniles passes Point Barrow, Alaska, in September and



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374. In the breeding season, Ross's Gulls *Rhodostethia rosea* require freshwater marshes formed by numerous water-filled ice polygons and small lakes that still remain partially frozen in mid June. The dominant vegetation here is Water Sedge *Carex aquatilis*, which grows on the damp ridges formed by ice polygons, while towards the edges of the marsh, and on the drier ridges, various grasses (Poaceae), willows including *Salix pulchra* and Dwarf Birch *Betula nana* predominate. Lower Kolyma River, northeast Siberia, June 1994.



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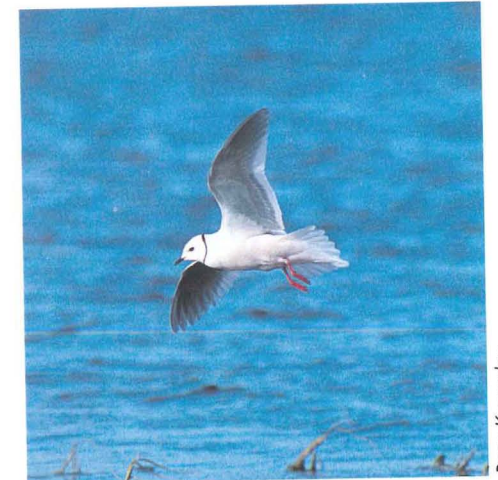
375. The nest of Ross's Gull *Rhodostethia rosea* comprises a shallow hollow in the *Sphagnum*, lined with dead leaves and grass or sedge stems. Two or three eggs are laid, which differ from those of other gulls in being more rounded and with a darker olive-green background colour (Dresser 1906; Densley 1991). Northeast Siberia, June 1994.

October as they depart from their northeast Siberian breeding areas and migrate east to unknown wintering grounds (Densley 1979). It appears that a substantial population of non-breeding birds, both adults and first-summerers, spend the summer among the pack ice between north Greenland and Franz Josef Land. During a transect on the Swedish ice-breaker HMS *Ymer*, from northern Svalbard to Franz Josef Land in July–August 1980, Meltofte *et al.* (1981) observed a total of 1,326 Ross's Gulls in pack ice, with the largest concentrations being found north of Nordaustlandet, eastern Svalbard, and

off northernmost Franz Josef Land. A transect between Svalbard and North Greenland in August and early September 1980 revealed the presence of at least 116 birds, while a second transect from Svalbard to Franz Josef Land in mid September produced 482 records of at least 116 individuals. Whether this region also represents the main wintering area remains unknown. Elsewhere, single birds are occasionally recorded off the northern coastline of Hokkaido, Japan, but a flock of about 100 at Shari, northeastern Hokkaido, on 23rd–27th February 1985 was exceptional (Brazil 1991).



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376 & 377. Adult Ross's Gull *Rhodostethia rosea* on nest in a small marsh near the settlement of Chukotschya, 200 km to the northwest of Cherskiy, lower Kolyma River, northeast Siberia, June 1994 (left); adult feeding over thaw lake adjacent to same nesting colony, June 1994.

This does, however, suggest that a population spends the winter in the pack ice off the coast of the northwestern Pacific Ocean.

Closer to home, the first British Ross's Gull was captured by the crew of a fishing boat near Whalsay, Shetland, on 28th April 1936 (Pennington 2005). Since 1969, the species has occurred almost annually in Britain, with a total of 83 birds recorded to the end of December 2003 (Rogers 2004). Despite this, it remains one of the most highly sought-after species by today's generation of birders.

In recent years, observing Ross's Gulls on the breeding grounds has become a realistic possibility. Since 1980, the regular breeding by a handful of pairs near Churchill, Canada, attracted many birders to see them at their most accessible breeding site. Although regular breeding no longer occurs here, other possibilities remain. Following the collapse of the Soviet Union, adventurous (and wealthy) birders have travelled to the Siberian breeding grounds and enjoyed the large nesting colonies on the boggy tundra of the lower Kolyma River.

Ross's Gulls still present us with many unanswered questions. Undoubtedly the most fascinating is the location of the main wintering area. If this really does lie among the Arctic pack ice, the unbelievably harsh conditions and perpetual darkness will ensure that Ross's Gull retains this final secret for many years to come.

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References

- Béchet, A., Martin, J.-L., Meister, P., & Rabouan, C. 2000. A second breeding site for Ross's Gull (*Rhodostethia rosea*) in Nunavut, Canada. *Arctic* 53(3): 234–236.
- Borodina, O. E., & Gromova, T. A. 2002. [Sergei Alexandrovich Buturlin]. Ulyanovsk: Korporatsiya Tekhnologii Prodvizheniya Publ. House, Ulyanovsk. [In Russian]
- Brazil, M. A. 1991. *The Birds of Japan*. Christopher Helm, London.
- Buturlin, A. S. 1985. [National gunsmiths. Arm expert Buturlin]. *Ruzhie i Snaryazhenie* 11: 28–29. [In Russian]
- Buturlin, S. A. 1906a. The breeding-grounds of the Rosy Gull. *Ibis* 8(6): Part 1: 131–139; Part 2: 333–337; Corrections 400; Part 3: 661–666.
- 1906b. [Brief news. News from the Kolyma expedition (from the two letters to A. P. Semenov)]. *Zapiski Imperatorskogo Russkogo Geograficheskogo Obschestva Obshei Geografii* 41(2): 295–299. [In Russian]
- 1907a. On the breeding habits of the Rosy Gull and the Pectoral Sandpiper. *Ibis* 9(1): 570–573.
- 1907b. [New East Asian forms]. *Ornithol. Monatsber.* 15: 79–80. [In German]
- 1908. [A zoogeographical account on bird distribution in Anadyrland and Chukotka (in the Magadan region), as well as in the Kolyma area, Yana area, and Yakutia general]. *J. Ornith.* 56: 282–294. [In German]
- 1909. On the occurrence of *Pseudoscolopax taczanowskii* in western Siberia. *Ibis* 9(3): 418–421.
- 1912. [The breeding grounds of Ross's Gull]. *Soc. Zool. de Genève* 1: 17–19. [In French]
- 1913. [Observations on mammals made during the 1905 Kolyma expedition]. *Dnevnik Zoologicheskogo Otdeleniya Obshchestva Lyubitelei Zivotnykh* 1(15): 225–266. [In Russian]
- Chartier, B., & Cooke, F. 1980. Ross's Gulls (*Rhodostethia rosea*) nesting at Churchill, Manitoba, Canada. *Amer. Birds* 34(6): 839–841.
- Degtyarev, A. G. 1991. [Aerial counts of Ross's Gull (*Rhodostethia rosea*) on the Yakut tundras]. *Zool. Zhurnal* 70: 81–85. [In Russian]
- , Labutin, Y. V., & Blohin, Y. Y. 1987. [Ross's Gull (*Rhodostethia rosea*): migration and breeding cycle near the borders of the range]. *Zool. Zhurnal* 66: 1873–1885. [In Russian]
- Dement'ev, G. P. 1938. [In memory of Sergei Alexandrovich Buturlin]. *Zool. Zhurnal* 17(6): 963–975. [In Russian]
- 1948. [Sergei Alexandrovich Buturlin and his work on nature conservation]. *Okhrana Prirody* 4: 106–107. [In Russian]
- & Gladkov, N. A. (eds.) 1954 (translated 1969). *Birds of the Soviet Union*. Vol. 3. Israel Program for Scientific Translations, Jerusalem.
- Densley, M. 1979. Ross's Gulls in Alaska. *Brit. Birds* 72: 23–28.
- 1991. Ross's Gulls in Siberia. *Dutch Birding* 13: 168–175.
- 1999. *In Search of Ross's Gull*. Peregrine Books, Horsforth.
- Dresser, H. E. 1906. Note on the eggs of Ross's Rosy Gull. *Ibis* 8(6): 610–611.
- 1908. Exhibition and remarks on eggs of *Lampronetta (Arctonetta) fisheri* and *Phylloscopus viridanus*. *Bull. BOC* 23: 39.
- 1909a. Exhibition and remarks on skins and eggs of *Pseudoscolopax taczanowskii* (Verr.). *Bull. BOC* 23: 60–61.

- 1909b. Exhibition and remarks on eggs of *Numenius tenuirostris* Vieill., *Gallinago megalis* Swinhoe and *Numenius arquatus lineatus* Fabr. *Bull. Brit. Orn. Club* 25: 38–39.
- 1909–10. *Eggs of the Birds of Europe, including all the species inhabiting the Western Palaearctic area*. Parts 19–24. Privately published, London.
- Hjort, C. 1980. Ross's Gull *Rhodostethia rosea* breeding in Peary Land, North Greenland, 1979. *Dansk Ornithologisk Forenings Tidsskrift* 74(1–2): 75–82.
- Kampp, K., & Kristensen, R. M. 1980. Ross's Gull *Rhodostethia rosea* breeding in Disko Bay, West Greenland, 1979. *Dansk Ornithologisk Forenings Tidsskrift* 74(1–2): 65–74.
- Kozlova, M. M. 1996. [S. A. Buturlin's contribution to the development of science]. *Bull. MOIP* 101(6): 3–14. [In Russian]
- 2001. [Sergei Alexandrovich Buturlin (1872–1938)]. *Nauka, Moscow*. [In Russian]
- 2003. [A written legacy of S. A. Buturlin]. In: Borodina, O. E. & Gromova, T. A. (eds.), *Buturlinskiy sbornik, Ulyanovsk*: 49–76. [In Russian]
- Lovenskiold, H. L. 1964. Avifauna Svalbardensis. *Norsk Polarinstittut Skrifter* 129: 460.
- MacDonald, S. D. 1978. First breeding of Ross's Gull in Canada. *Proc. Colonial Waterbird Group* 1978: 16.
- Meltofte, H., Edelstam, C., Granström, G., Hammar, J., &

- Hjort, C. 1981. Ross's Gulls in the Arctic pack-ice. *Brit. Birds* 74: 316–320.
- Pavlov, B. M., & Dorogov, V. F. 1976. [The Ross's Gull (*Rhodostethia rosea*) in the Taimyr]. *Ornithologiya* 12: 240–241. [In Russian]
- Pearce, J. M., Esler, D., & Degtyarev, A. G. 1998. Birds of the Indigirka River delta, Russia: historical and biogeographic comparisons. *Arctic* 51(4): 361–370.
- Pennington, M. G. 2005. Additional information on three firsts for Britain recorded from Shetland. *Shetland Bird Report* 2004: 119–120.
- Potapov, E. R. 1990. Birds and brave men in the Arctic north. *Birds Internat.* 2(3): 73–83.
- Rogers, M. J., and the Rarities Committee. 2004. Report on rare birds in Great Britain in 2003. *Brit. Birds* 97: 558–625.
- Ruzskii, M. D. 1938. [In memory of the ornithologist S. A. Buturlin]. *Trudy Biologicheskogo NII Tomskogo Gosudarsvennogo Univesiteta [Section Zoology, n2]* 6: 216–217.
- Sudilovskaya, A. M. 1973. [In memory of S. A. Buturlin]. *Bull. MOIP* 78(2): 153–155. [In Russian]
- Uspenskii, S. 1973. [S. A. Buturlin as an expert of the North]. *Okhota i Okhotnichie Khozyaistvo* 7: 6–7. [In Russian]
- Yésou, P. 1994. Contribution à l'étude avifaunistique de la péninsule du Taimyr. *Alauda* 62(4): 247–252.

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378. Ross's Gull *Rhodostethia rosea*, near the Indigirka River, northeast Siberia, June 1999.