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HMS *Challenger* in the Antarctic: pictures and photographs from 1874

ROSAMUNDE CODLING

ABSTRACT *HMS Challenger was probably the first official expedition to carry a photographer as well as an artist. A survey has been made of the illustrations and photographs made during their 3-week voyage in polar waters during February–March 1874. Documents from this period reveal the interest and excitement generated by ice. The eight existing photographs are the earliest known images of southern icebergs and some appear to have been used as the basis for later illustrations. The work of the official artist was supplemented by drawings and watercolours by several of the ship's officers and scientists, as well as a unique lower-deck collection by a cooper. The fascination with ice is evident in all work, but both professional and amateur artists portrayed ice in a straightforward and realistic manner. A different approach has been identified in later work, produced at a distance. Although based on* Challenger *material, images were reworked so as to increase the dramatic effect and romanticize the illustration.*

KEY WORDS: Antarctic, exploration, HMS *Challenger*, art, photography

Introduction

In December 1872 HMS *Challenger* set sail from Portsmouth to begin ocean surveys that were to last almost three and a half years, and cover 127,634 kilometres (68,890 nautical miles). About 240 men—officers, crew, scientists and technicians—took part in a voyage which covered the Atlantic, Southern Ocean and Pacific, contributing greatly to the developing science of oceanography. Apart from the extensive scientific studies, the voyage was notable in at least three further ways: it was probably the first major expedition to carry an official photographer as well as an official artist; HMS *Challenger* became the first steamship to cross the Antarctic circle; and eight photographs, dating from February 1874, are the earliest known images of southern icebergs (Headland, 1989, p. 191).

This study is focused on the 3 weeks *Challenger* spent in sub-Antarctic and Antarctic waters and examines, firstly, the artistic work executed in this period by both the official artist and also by other members of the expedition, and, secondly, the photographs of icebergs. Consideration is then given to the way these works were subsequently used in published material.

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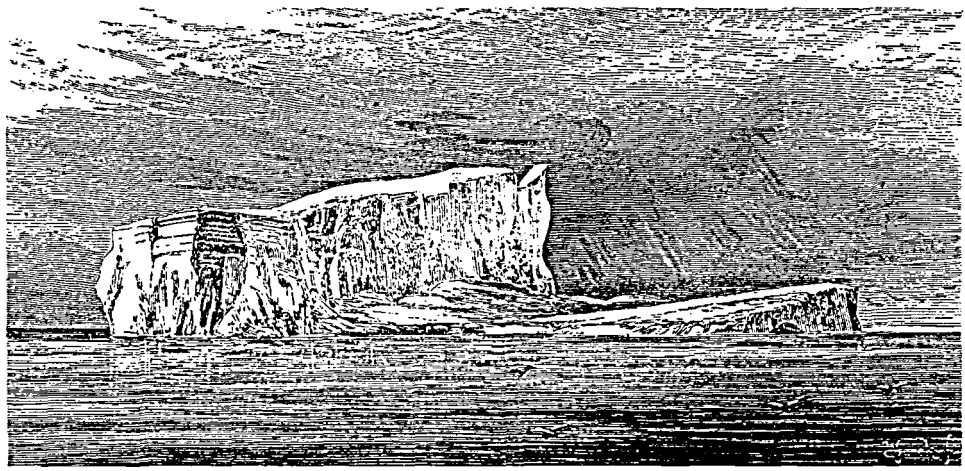


Figure 1. 'Iceberg seen 21st February' from Thomson and Murray's *Narrative*, p. 402. Two shots were fired at this iceberg.

Sources

The artist was one John James Wild. Little has been found about his life and the only originals of his work are located in the archives related to the publishing of the *Challenger* reports at the University of Edinburgh. They hold a collection of about 80 works, but none for the Antarctic stage of the voyage. Assessment of his work for that period has therefore been by means of illustrations in two books—the official report of the voyage and Wild's own account (1878) *At Anchor: a narrative of experience afloat and ashore during the voyages of HMS 'Challenger' from 1872–1876.* In making this initial search, it became apparent that several other members of the expedition were amateur artists, producing work that deserved study.

After the return of the expedition in 1876 it took many years to edit all the 50 volumes of the scientific report. The *Report Narrative of the Voyage: Volume 1, parts 1 and 2* (1885) was mainly used in this study but for ease it will be referred to as the *Narrative*, with Thomson and Murray (this edition 1965) as editors. It has a total of 19 titled reproductions of icebergs and pack ice, presumed to be based on drawings by Wild, plus one from a naval officer (Figure 1).

Immediately following the return of the *Challenger*, several members of the expedition published books recounting their experiences. For example, Moseley, later to be Professor of Zoology at Oxford, produced *Notes by a naturalist on the 'Challenger', being an account of various observations made during the voyage of H.M.S. 'Challenger' round the world in the years 1872–1876* (1879) which provided a detailed but lively account, often illustrated by engravings based on his own drawings. At least two lower-deck records have also survived and these provide interesting material from a very different perspective. A sketchbook found in an American antique shop gave a visual record from Shephard, one of the ship's coopers (Stewart & Henderson, 1972), whilst the letters sent home by Joseph Matkin, a steward's assistant, provided written insights into life on board (1992).

The centenary of the expedition resulted in the publication of several volumes, one of which, Linklater's *The Voyage of the Challenger* (1972), gives an

enjoyable narrative account as well as being well illustrated. Further reproductions of paintings, sketches and other illustrations, seemingly by different hands, as well as contemporary photographs (although none of icebergs), may be found in Reader's Digest (1985, pp. 120–125).

The Artist

Wild was a member of the civilian staff and also had to serve as private secretary to the Director of the Scientific Staff, Dr Charles Wyville Thomson, who was also a civilian. The dual role was typical of the lot of expedition artists (see, for instance, Jacobs, 1995), but at least he was financially rewarded for his efforts, as his annual pay was £400, twice that of other members of the civilian staff (Thomson & Murray, 1965, p. 19).

In 1872 he wrote from Belfast to Dr Thomson, Professor of Natural History at Edinburgh University, who had persuaded the Royal Society to fund the expedition. The letter shows that Wild had already made zoological illustrations for Dr Thomson and that there was a respectful friendship between the two men and their wives. Wild also expressed his excitement: 'the proposal of going with you on this expedition appears to me in reality so brilliant that I am almost afraid to realise the idea, lest in case of failure the disappointment would be too great' (MS Letter, 9 January 1872). In one of the expedition's group photographs Wild is seen seated on deck with other civilian staff. He wore an open-necked shirt with a casually-knotted scarf, showing distinct sartorial differences between him and his more formally-dressed companions (Reader's Digest, 1985, p. 120).

At the end of the voyage Dr Thomson was appointed editor of the scientific reports. After his death in 1882, the work was carried on by John Murray, one of the 'Naturalists', but the *Narrative* was not published until 1885. In the opening editorial note Murray wrote:

> Nearly all the woodcuts of scenery, and many of those of animals, are from the sketches and drawings of Dr J. J. Wild, who accompanied the Expedition as Artist and Private Secretary to the Director of the Civilian Scientific Staff; in 1884 Dr Wild forwarded from Australia a large number of sketches taken during the cruise, from which a selection was made. (1965, p. vii)

However, a further note on the title-page of the *Narrative Volume 1, part 2*: 'Partly illustrated by Dr J.J. Wild, Artist to the Expedition', suggests it is unwise to assume that all the illustrations were by Wild. Some are clearly headed 'from a photograph', a process which would not have required Wild's attention.

No indication is given as to how Wild received a doctorate, or where he was resident in Australia. A note in the front of *At Anchor* (1878) confirms the title, so it must have been conferred on him in the 2 years immediately following the return of the expedition. During that period he also published *Thalassa: an essay on the Depth, Temperature, and Currents of the Ocean* (1877).

More to the point of this paper, the note in *At Anchor* stated that the 'typographic etchings' are by Dr Wild, and they bear his monogram. The seven illustrations in the chapter entitled 'The regions of the South Pole' (1878, pp. 70–78) convey clearly the form of the ice, with its weathered and irregular surfaces. Wild was obviously competent in production of etchings, and his

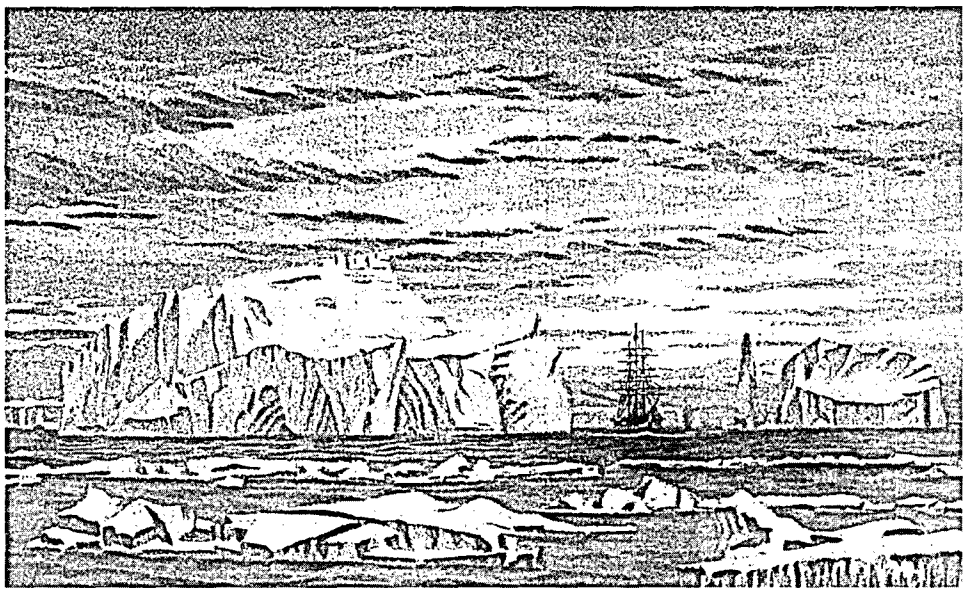


Figure 2. Coloured plate from Wild's *At Anchor*, opposite p. 74. It appears to be a composite picture based on sketches made in the Antarctic.

uncoloured works in *At Anchor* have a simplicity that contrasts with the more detailed images in the *Narrative* (Figures 2 and 3). The only coloured plate in his own book that showed a polar scene was entitled 'HMS *Challenger* among the icebergs of the Antarctic Ocean'. By modern standards the colour is crude with flat areas of bottle green for the sea, but the underlying drawing of the ice and the ship is convincing.

The University of Edinburgh holds several of Wild's sketches of the peri-Antarctic islands visited by the *Challenger*—Prince Edward Islands, Iles Crozet, Iles Keguelen and Heard Island, as well as a view of a glacier on the north shore of the Magellan Strait off South America. They are carefully-drawn water-colours, fulfilling Wild's own description of his work: 'simple topographical ... sketches, representing as accurately as the circumstances of their production would permit, the natural scenery' (1878, p. 4). However, it is frustrating to read Matkin's comment: 'The Artist made sketches of most of the large icebergs,' (1992, p. 141). Presumably there must have been many drawings, but despite enquiries these have not been traced.

Other Artists on the Expedition

Although he was the official artist, Wild was not the only individual who drew and painted. During the 19th century it was considered a necessary accomplishment for many, including both naturalists and naval officers. The book jacket for Linklater's account (1972) is a reproduction from the first volume of the Chief Paymaster R.R.A. Richard's journal, whilst the back of the jacket shows the first page of Lieutenant Pelham Aldrich's journal where the handwritten text frames two ink and water-colour sketches. Further examples in Linklater's text show his facility in the use of water-colour.

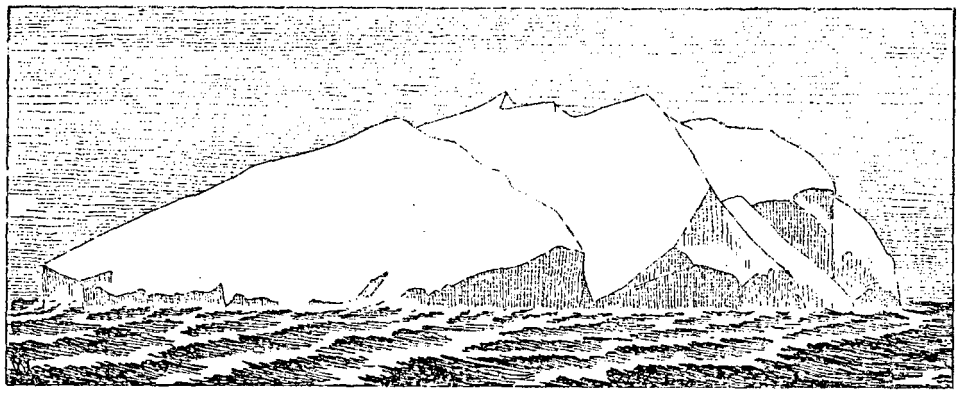


Figure 3. 'The *Challenger's* antagonist' from Wild's *At Anchor*, p. 76. The iceberg damaged the rigging of the ship in the collision on 24 February 1874.

The archive at Oxford contains some of the water-colours used as the basis for engravings in Moseley's own book (1879). It is almost certain they were painted after the event, rather than as on-the-spot coloured sketches. This is indicated by the way the washes have been laid, and also by the technical difficulties of using the medium outside in Antarctic temperatures. A later artist, Edward Wilson, who was with Scott on both the *Discovery* and *Terra Nova* expeditions wrote: 'One is very limited as to methods. Pencil and chalk are the only things possible out of doors' (1911, no pagination). Wilson's own method was to annotate his sketches with detailed notes about colour, so that he could do later work on a painting indoors.

The record made by one Benjamin Shephard, a cooper on board *Challenger*, consists of a single sketchbook containing 34 watercolours, of which six relate to the Antarctic (Stewart & Henderson, 1972). Every painting follows the same oval pattern, showing the *Challenger* against a scenic background, usually her various ports of call. The style is naive and the paintings are framed by an ornamented belt on which the painting's title is written.

Few examples exist of work by members of the lower deck from any polar expedition, so this collection is of particular interest. The editors of Shephard's work pointed out that the: 'renditions of the ship itself, are extremely accurate with the single exception that—as a true man of sail—he frequently refuses to show in his paintings that the *Challenger* had a stack' (Stewart & Henderson, 1972, Introduction, no pagination). The offending item is conveniently hidden by the fore sail in four of the Antarctic paintings and can only be clearly distinguished in one. The sixth, *HMS 'Challenger' fireing at ice burgh Feby 1874*, is ambiguous—is it disturbed water behind the ship or smoke from the stack (Figure 4)?

The Photographs

Several albums of *Challenger* photographs exist and Brunton (1994) painstakingly collated all known images with earlier lists, as well as giving further background information. Dr Thomson is known to have been a competent photographer but the text of the *Narrative* was remarkably silent about the photographers—no

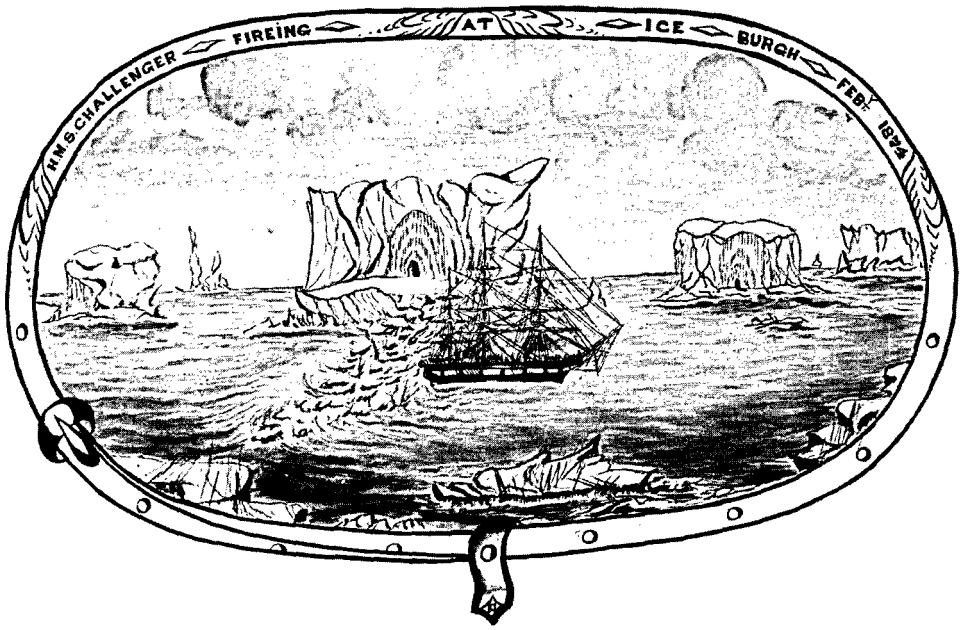
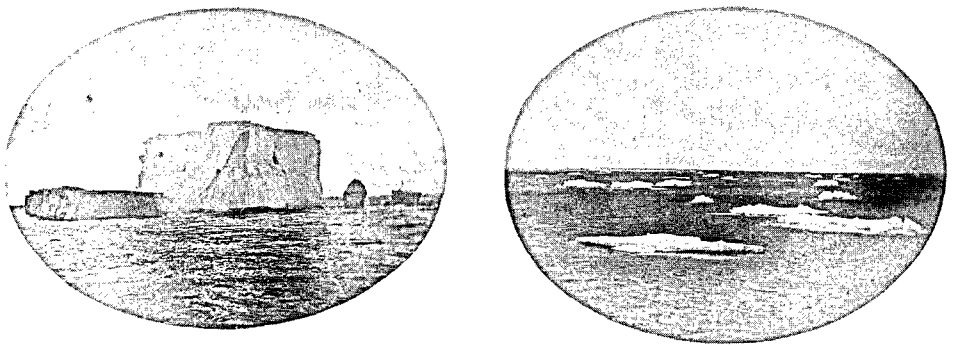


Figure 4. 'HMS *Challenger* firing at ice burgh Feby 1874'. Watercolour by Shephard from the *Challenger Sketchbook*, J. Welles Henderson Collection, by courtesy of Independence Seaport Museum, Philadelphia, USA

names were given and no equipment listed. The reason for this reticence may be because at least two deserted during the voyage, including Caleb Newbold, listed in Ship's Ledgers as a Corporal in the Royal Engineers (Brunton, 1994, p. 17). Since 1855, a training programme in photography had been established by the Royal Engineers, enabling skilled men to be sent on expeditions, such as the one to survey the United States-Canadian border on the Forty-ninth Parallel (Haworth-Booth, 1984, p. 114). It may therefore be presumed that the early photographic work on the *Challenger* was in skilled hands, but as Newbold absconded in South Africa, prior to the voyage south, another photographer had to be appointed.

No details have been found of the cameras used on the *Challenger* and the only records that exist refer to various chemicals, albuminized paper and glass plates. Consequently, it is not possible to assess how much tolerance of movement there was when taking photographs on board ship. Brunton's total collection numbers over 820 images and it is clear that the vast majority (over 97%) were taken on land. At the most, 12 other photographs, apart from the iceberg series, were taken from the ship, and all show a calm sea so it is assumed that this was a prerequisite for use of the equipment.

Even today, the extreme climatic conditions found in polar areas affect both camera and film but in the 1870s the problems would have been exacerbated by the limitations of available equipment and techniques. It is also assumed that limitations were imposed on the photographer by the very nature of the expedition. *Challenger's* scientific work included the taking of soundings and the establishment of stations to enable deep-sea dredging to take place. During these activities, the decks were taken up by trawls and other equipment, demanding



(a) (b)

Figure 5. Photographs taken during February 1874 from Thomson and Murray's *Narrative*. (Reproduced by courtesy of the Natural History Museum London.)

5a. The target iceberg (*Narrative*, plate XIIa, Brunton photograph 280).

5b. The most successful Antarctic photograph, possibly due to the floes giving perspective to the image (*Narrative*, plate Xb, Brunton photograph 280).

graphs, there would have been few options in the choice of viewpoint or distance to the object.

A total of eight photographs of icebergs exist and all are included in the *Narrative* as pairs on plates X–XIII (see figure 5 for an example). Reference will be made to the left-hand photograph as 'a' and the right-hand as 'b'. The photographs have been masked, resulting in oval images simply entitled 'Antarctic ice', but by cross-referencing to various texts and other illustrations it has been possible to date two of them to the 21 and 25 February 1874 (plate XIIa, Brunton photograph 280; plate Xb, Brunton photograph 281 respectively).

The photographs taken on board *Challenger* were available to members of the crew. The price was one shilling, chargeable to personal accounts, and from Matkin's letters it is clear that many took the opportunity to purchase prints. He promised his family he would send them 'some photographs of these bergs' (1992, p. 142). Ten years after the end of the voyage the price was still the same (Brunton, 1994, p. 15), showing commendable economic restraint.

Polar Phenomena: ice and light

It is not known how many members of the expedition had been in polar waters before, but it is clear that most on the ship were fascinated by ice. Matkin wrote: 'We passed one on the night of the 14th, which looked something like Windsor Castle ... nearly all hands were on deck to see it' (1992, p. 141). These were early days in polar waters for the *Challenger*. By the time they had had a collision with a berg and periods of stormy weather, Matkin recorded: 'Altho' we were all eager to see an iceberg, we are just as anxious to lose them now, it is so dangerous sailing these foggy nights with such masses of destruction all round us' (1992, p. 146).

Many of the verbal descriptions emphasized colour, possibly for two reasons: firstly, to refute the general notion that icebergs were white, and

secondly, because it was realised that published accounts would be predominantly in black and white. The *Narrative* quoted Moseley:

> The colouring of the southern bergs is magnificent. The general mass has an appearance like loaf sugar, with a slight bluish tint, except where fresh snow resting on the tops and ledges is absolutely white. On this ground colour there are parallel streaks of cobalt blue, of various intensities ... The colouring of the crevasses, caves, and hollows is of the deepest and purest azure blue. None of the artists on board was able to approach a representation of its intensity. (Thomson & Murray, 1965, p. 433)

Throughout the history of polar exploration there have been examples of confusion caused by the light and atmosphere of polar regions. The *Narrative* illustrated some of the difficulties in interpreting what exactly was being seen:

> ... some distant bergs were seen to assume a most intense black colour. This was due to their being thrown in shade by clouds passing between them and the sun, and the heightening of this effect by the contrast with brilliantly lighted up bergs all around them. They looked like rocks of basalt. (Thomson & Murray, 1965, p. 434)

Another example of 'visual confusion' was Termination Land, confidently charted by the American Charles Wilkes in 1840. *Challenger* searched in vain for the plotted coastline and Matkin wrote:

> ... we were on the exact spot ... & no sign of land was to be seen ... so may conclude that Termination Land has no existence, & the Yankees were deceived by a large iceberg, or well defined cloud.... had it not been for our having steam, we might have marked new lands down on the Southern Charts; but, altho' we could all have sworn, that we saw land on one occasion, on steaming towards it, it proved to be a peculiar, & remarkably defined vapour cloud. (1992, p. 144)

These difficulties faced, and continue to face, all polar visitors including artists and photographers trying to capture the images they saw. Distance is particularly difficult to comprehend and consequently it is not easy to convey scale. The French explorer Charcot summarized the problem clearly:

> nothing is so productive of error as the eyesight in polar regions. The least change in the weather alters one's estimates in truly fantastic manner, and all distinction between different levels vanishes. (1911 translation, this edition 1978, p. 89)

The Recording of the Icebergs of the Southern Ocean

The first iceberg was seen on 11 February 1874. Daily sightings occurred until 4 March by which time *Challenger* was en route for Australia. During these 3 weeks five stations took place. Weather and sea conditions influenced procedures, but a typical station took about 8 or 9 hours. Sails were furled, steam got up so that soundings and dredgings could be carried out. These stationary conditions, and also 3 days of calm weather from 20–22 February, were clearly conducive to both artists and photographers. Perhaps the very title of Wild's

book—*At Anchor*—gives an indication of the conditions he desired for his work.

Three events stand out during the 3-week period—the shooting at an iceberg, the blizzard resulting in a collision with a berg, and the lowering of a boat to investigate the pack. On 21 February the weather was calm and during the afternoon the ship closed in on an iceberg. It was photographed and appears to be Plate XIIa in the *Narrative* (Brunton photograph no. 280, shown as Figure 5a). The *Narrative* also had a woodcut of this berg seen from a different angle (Thomson & Murray, 1965, figure 152, p. 402, shown as Figure 1) together with a description of the event:

> The first shot was directed at a low part of the berg about 100 feet from the ship, and striking against pure ice split off a great mass from the ice-cliff, which, tumbling into the water between the berg and the ship, created quite a commotion. The second shot was directed at the upper part of the berg about a third of the distance below the summit, which was 180 feet high, and striking against the softer part merely buried itself in the snow-cliff. (Thomson & Murray, 1965, p. 402).

Shephard painted the event, suggesting much disturbance as the ice cascaded down after the first shot (Stewart & Henderson, 1972, plate 29, shown as Figure 4). He showed the cave in the ice which may also be seen in Wild's drawing in the *Narrative* (Thomson & Murray, 1965, plate D2, opposite p. 432). His painting also contains pinnacles of ice, similar to one shown by Wild in his coloured illustration (1878, opposite p. 74, shown as Figure 2). Although it has not been possible to cross-reference these with photographs or other illustrations, it suggests that Shephard attempted accurately to convey what he saw. The archive at Oxford also contains an unnamed drawing of the same incident, possibly by Moseley, but although detailed it lacks the action of Shephard's work.

The second incident occurred 3 days later on 21 February. The weather worsened and a gale blew up, so the ship took refuge under the lee of an iceberg, with engines steaming slowly to keep head to wind. A sudden lull in the wind 'caused the ship to gather headway, and before the engines could be stopped the vessel ran into the berg and carried away the jib-boom, martingale, and one of the whiskers' (Thomson & Murray, 1965, p. 404). Wild's drawing of 'The *Challenger's* antagonist' (1878, p. 76, shown as Figure 3) is the simplest of his Antarctic sketches, probably because of the speed of events after the collision and the need to stay out of the way of sailors under emergency orders. A lively rendering of the occasion is the pencil and wash drawing, presumed to be by Moseley (Reader's Digest, 1985, p. 125). The form of the iceberg is similar to that shown by Wild, but the view is that of an onlooker, seeing the incident from a convenient but imaginary viewpoint.

The following day, 25 February, the weather was calmer and the *Narrative* has three illustrations for this day. There is also a link with one of the photographs. Plate Xb (Thomson & Murray, 1985, opposite p. 398, shown as Figure 5b) is of the same ice floes and berg shown in figure 155 (1985, p. 406) and is similar to an illustration in Wild's book (1878, p. 77 bottom), although there are some variations in the positioning of the floes.

A boat was lowered to investigate the nature of the pack ice. Matkin recorded this event and wrote that whilst the *Challenger* 'was forcing her way

through a large field of floating ice, the Artist sketched her from a Boat' (1992, p. 146). Perhaps this was the occasion when Wild gathered some of the material that he ultimately used to produce the coloured plate in *At Anchor* (1878, opposite p. 74, shown as Figure 2). This is a composite work. The massive iceberg to the left of the ship is that seen on 19 February and shown as plate C5 of the *Narrative* (1965, opposite p. 430) and the foreground grouping of floes is found in Figure 155 of the same volume (1965, p. 406). It has not been possible to identify the other ice groupings of the picture.

Reports in *The Illustrated London News*

The *Challenger* voyage was one of the first major expeditions to be regularly reported in the home press. Information was supplied to *The Illustrated London News* (ILN), a weekly journal then illustrated by engravings, presumably prepared by the journal's own staff. There was an inevitable time-lag, as may be seen from the incident of the collision with an iceberg. This occurred on 24 February, but it was not until 17 March that the *Challenger* arrived in Melbourne, enabling material to be sent to London. The written report appeared in *The Illustrated London News* on 6 June 1874, with acknowledgement to Lieutenant Aldrich: 'for two sketches of the ship encountering ice-drifts and snowstorms, in the middle of February last' (LXIV: 1815, p. 538). There is no mention of the actual collision—simply that 'icebergs on the lee beam were closely approached' (p. 538). Whether the censorship took place on the *Challenger* before sending the report, or at an editorial desk in London cannot now be ascertained. Aldrich's diary included two sketches, one of the actual collision and the second of the *Challenger* in the subsequent snowstorm (see black and white illustration in Linklater, 1972, p. 89), both seen from the position of an onlooker. A similar scene also appeared in the *Narrative* (Thomson & Murray, 1965, Figure 154, p. 404) where it was credited to Aldrich. There are thus three extant versions of the same event—the original in Aldrich's diary, a woodcut in the *Narrative* and an engraving in the ILN.

Aldrich's diary and the *Narrative* illustrations are similar, though perhaps the snow is denser in the diary sketch, but differences appear when these two are compared with the ILN illustration. In the weekly journal the angle of the ship is steeper, the seas are higher, the smoke from the stack is being blown harder by the wind and the main topsail appears torn, rather than with the weather clue set aback as reported by the *Narrative* (Thomson & Murray, 1965, p. 405). There was no doubting the seriousness of the situation that faced the *Challenger*, but it appears to have been the journal's engraver who took on the role of picture editor, presumably for increased dramatic effect.

A further polar illustration appeared in the ILN later in the year from 'a correspondent on board the ship' (28 November 1874, LXV: 1840, p. 505). The *Challenger* is shown within heavy floes, flanked by large icebergs (Figure 6). Brunton's photograph 326, listed as 'Wild's drawing', is the obvious basis for the ILN illustration. In his album Moseley wrote below his print: 'Combining various Ice Phenomena. The ship was never in such a position. Moreover Royal Yards were never crossed down South, & flying Jibboom was stowed'. The print appears to be a copy of a water-colour, but it is difficult to be certain. The largest of the icebergs is similar to illustrations by Wild in the *Narrative* (Thomson & Murray, 1965, opposite p. 429) and in his own book (1878, p. 73). The profile of

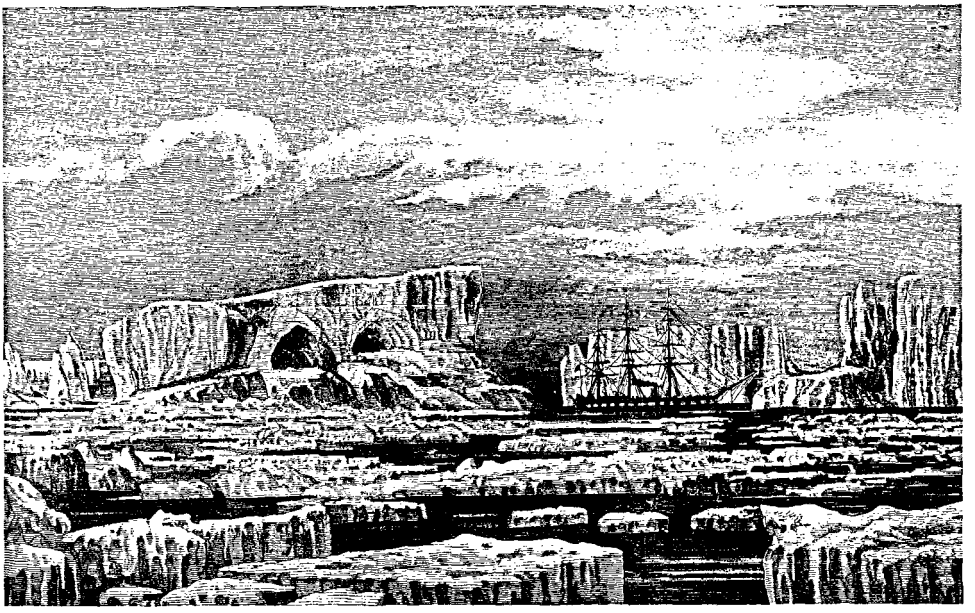


Figure 6. 'Among the icebergs of the Antarctic' from the *Illustrated London News*, 28 Nov. 1874, p. 505. (Reproduced by courtesy of the *Illustrated London News* Picture Library, London.)

the ship is remarkably similar to Brunton's photograph 93, showing the *Challenger* at St Thomas in the West Indies and the implication is that Wild used this photograph in this composite picture.

Comparison of the photograph with the ILN illustration indicates that the picture had been redrawn. One unfortunate result of this is that edges have been rounded, and the angularity of the southern bergs has been lost. Much of the ice in the Antarctic comes from fragments breaking off the ice sheet, so flat tops are more typical than in the glacier-derived ice of the north. These differences have been lost in the ILN drawing , and the general impression is of a more crowded, ill-defined scene.

After the passage of over 120 years, it is not easy to make judgements as to motives, but one interpretation is that the ILN, more used to Arctic illustrations, reworked the image for their readers, romanticizing the scene so as to portray the danger and excitement of a hazardous voyage in previously-reported 'perilous regions' (ILN, 6 June 1874, LXIV: 1815, p. 538). A more innocent assessment would see the difficulties of an engraver sitting in London and receiving sketches or photographs on which to base a final work. He might not be aware of the importance of the density of ice cover, or subtleties concerning angularity. Nevertheless, as the first polar engraving clearly exaggerated aspects of *Challenger* in the gale, it must be concluded that the first supposition is more likely. The *Illustrated London News* did not simply use engraving as the means of communicating an image to its readers, but was willing to take artistic licence in order to dramatize and romanticize events.

The Colophons of the Narrative Account

Throughout the *Narrative* sections or chapters were concluded with a colophon offering vignettes of the life of the expedition, such as examining the contents of the trawl, or obtaining plant specimens. One of the ship's dogs, a black labrador-type, was frequently shown, often portrayed as showing a keen interest in the scientific work (Thomson & Murray, 1965, Vol. 1, part 1, p. 191) One of the colophons is fanciful, with two mermaids assisting in the collection of fishes for a sample net (p. xxix), whilst another is patriotic, showing Mr Punch in sailor's uniform, cheering the departing *Challenger* (p. 20, taken from *Punch* 63: iv, 28 December 1872). Some would now be considered 'politically and environmentally incorrect'. A scientist kicks out at pecking penguins, seeking to protect their eggs (Thomson & Murray, 1965, Vol. 1, part 1, p. 288) whilst two sailors use a pulley to haul up an obviously live shark, with two worrying dogs under it (Thomson & Murray, 1965, Vol. 1, part 2, p. 560). Many are signed by Elizabeth Gulland, a lady who did not go on the expedition, but was involved in the production of the *Narrative*. In some cases she clearly worked from photographs, but in others it appears she based her drawing on sketches that have since disappeared.

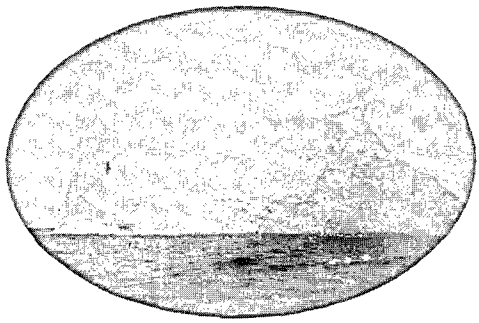
The Edinburgh University Library holds one unsigned and untitled work showing the *Challenger* under sail, keeling over under the wind with a surging bow wave, passing in front of an iceberg (Figure 7b). The work was used to end the chapter relating to the voyage from Heard Island to the Antarctic Circle and Australia (Thomson & Murray, 1965, p. 404, shown as Figure 7c).

The painting of the iceberg is taken directly from one of the 'Antarctic ice' photographs that appear in the *Narrative* (Thomson & Murray, 1965, Plate XIIIb, shown as Figure 7a). Both Brunton's and the ship's referencing systems make this the first of the Antarctic series (Brunton photograph 279, 1994, p. 37). It is therefore reasonable to suppose that it predates photograph 280, which was taken on 21 February 1874. As can be seen from the dated illustrations, particularly in the *Narrative*, many large icebergs were seen especially between 14–21 February. Two stations were also made in that period, offering relatively motionless conditions for photography.

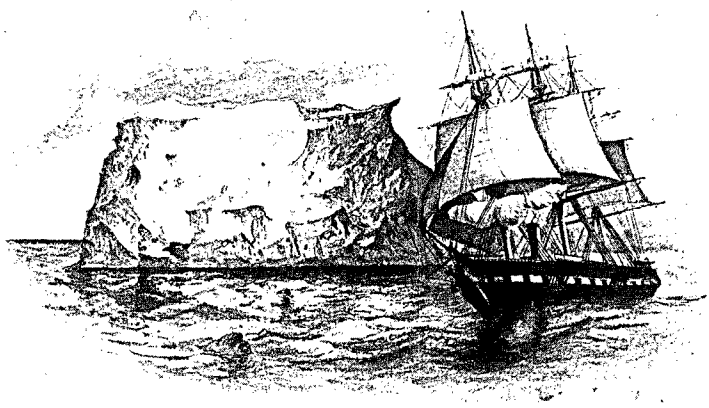
It is not likely that the spectacle depicted by the colophon occurred in the Antarctic. If the photograph dates from the first week amongst the ice, a skilled naval captain would hardly have sailed in such a dashing manner in uncharted polar waters. It suggests that the illustration is a later composite work, based on the photograph and a skilled representation of the *Challenger*. It is not unreasonable to conclude that it was produced specifically to provide a triumphant ending to the chapter which chronicled a successful voyage in dangerous waters. The editors of the *Narrative*, all scientists of high standing, appear to have allowed themselves the pleasure of visually embellishing the end of this part of their work with an imaginary artistic flourish.

Discussion

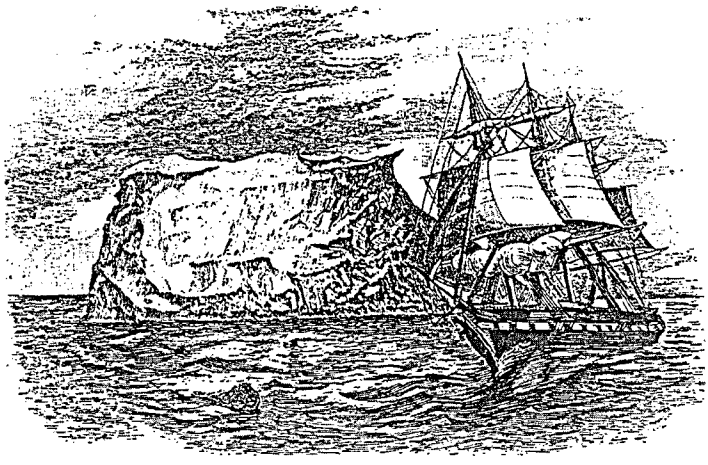
Any assessment of pictorial and photographic work resulting from the *Challenger's* voyage should be seen in the context of the 'polar views' then prevalent in Britain. During the latter half of the 19th century, popular interest had focused on the Arctic mainly because of the mystery of the last Franklin expedition to



(a)



(b)



(c)

Figure 7. The colophon from Thomson and Murray's *Narrative*.

7a. The photograph (*Narrative*, plate XIIIb, Brunton photograph 279, reproduced by courtesy of the Natural History Museum, London).

7b. The watercolour (reproduced by courtesy of the Edinburgh University Library).

7c. The printed colophon (*Narrative*, p. 414).

northern waters. In 1845 Sir John Franklin had left to search for a Northwest Passage, but his expedition disappeared and their fate remained an enigma. Repeated search expeditions were sent but it was not until 1859 that messages were found in Northern Canada. Franklin had died in the summer of 1847, the ships had been abandoned and the survivors were attempting to reach Hudson Bay Company Posts. None succeeded. The tragedy received wide publicity, inspiring both painters and writers. As an example, Wilkie Collins and Charles Dickens collaborated in the development and writing of a play *The Frozen Deep*, set in the Arctic. In the summer of 1857 a Command Performance was given in front of Queen Victoria, with Dickens and Collins taking the leading roles. It was revived in 1866 and again in 1874, showing the continued interest in polar matters (Codling, 1986).

Franklin's expeditions and the many search parties sent after him greatly extended knowledge of the Canadian North. In contrast, the Antarctic was largely unknown. The only activity was sealing, centred on the Antarctic Peninsula. In other parts of the continent, only occasional sightings of the extensive coastal ice and land had been made. The discovery of Victoria Land by Sir James Clark Ross in 1841, together with the Ross Sea and the Ross Ice Shelf, was the last major discovery to be made until the beginnings in about 1895 of the so-called heroic age of exploration. The *Challenger's* visit to southern polar waters would therefore have been seen as venturing into the unknown, a visit to seas traversed by Coleridge's *Ancient Mariner* (although it should be noted that Doré's engravings for that work were not to be published until 1875, the year after the *Challenger's* visit).

Jacobs' recent study *The Painted Voyage: art, travel and exploration 1564–1875* (1995) only briefly considers polar areas, and even then concentrates on the Arctic, dismissing the Antarctic in a few lines. Yet the subject of the painting used by Jacobs to conclude his book—an 1861 oil painting of a northern scene by the American artist Frederick Church, entitled *The icebergs*—appears to be in common with the subject matter of all of the works considered in this essay. Against the background of towering icebergs lay the pathetically small and broken wreckage of part of a ship's mast. Jacobs maintained that this picture 'attained what had now become the ultimate goal of the intrepid travelling artist—to portray nature at her most strikingly unusual, and to do so with an overlay of metaphor, poetry and adventure' (1995, p. 153). Is his view supported by the Antarctic work resulting from the *Challenger* voyage?

Jacobs' evidence to support his theory may well be valid for 'the intrepid travelling artist', but it is suggested that those on the *Challenger*, including Wild, should be seen as individuals with varying levels of artistic skills who had the opportunity to travel, rather than artists who specifically chose to travel. All had been selected to go on the voyage because of their abilities, whether maritime, scientific or craft based. They were part of a scientific mission and their work reflected this, as they portrayed natural phenomena in a straightforward and realistic manner. Their fascination was with ice, which probably most would describe as 'nature at her most striking' (in more ways than one), but whilst they recognized the adventure in their work, they had no need of overlays of metaphor or poetry. Even Wild, as a professional artist, did not conform to Jacobs' theory. Assuming the illustrations in the *Narrative* and *At Anchor* follow his original work closely, he was generally true to his intentions of 'representing ... accurately ... the natural scenery' (1878, p. 4). The main exception is the

composite work that ultimately appeared in the ILN. There he condensed images, and added the *Challenger* to the scene.

The frequency of representations of the *Challenger* from a distance is one major difference between the works of the professional and amateur artists. Only one reference has been found to the lowering of a boat, enabling the *Challenger* to be seen in this way, yet many of the amateur artists repeatedly produced works showing their ship surrounded by spectacular bergs and floes. There would definitely have been no opportunity for 'views from afar' during the collision with the iceberg, yet it was illustrated by at least three different amateur hands, all showing the iceberg as well as the ship. Wild, as the professional artist, limited his illustration of this incident to a view that he could observe, rather than imagine.

One exception to Wild's pattern of illustration has been identified, dating from the period immediately before the polar period of the expedition. His painting that was used as figure 133 in the *Narrative*, 'Cape Challenger, Kerguelen Island with Mount Ross in the distance', shows the rugged coastline of the peri-Antarctic island with *Challenger* passing from left to right. The near-identical scene was also painted by Shephard but he showed *Challenger* moving in the opposite direction, from right to left. Henderson and Stewart (1972, plate 4) examined the two works, together with the chart of the voyage, and concluded that the cooper was more accurate than the artist. They suggested that a photograph may have been used by both men, but even though coverage of Kerguelen is particularly good (Brunton photographs 291–324), all surviving prints were from land based positions, and Cape Challenger was only seen as the expedition was actually leaving the islands. As the two works are so close, it can only be presumed that either Wild or Shephard sketched the scene and allowed the other to work from that drawing. The reasons for Wild's apparent inaccuracy in portraying the direction of the *Challenger* cannot now be established.

To a 20th-century eye, the series of photographs which appear in the *Narrative* may appear to be flat, lacking contrast in either tone or scale, but these limitations are partly due to reproduction techniques used in the book publication. Examination of the sepia prints in one of the *Challenger* albums enables far greater detail to be seen, although even then the difficulty in conveying scale when there was nothing to indicate the size of the mass is apparent. Perhaps the most successful is Brunton's photograph 281 which was able to use the pack to give a sense of perspective, with icebergs in the distance (Figure 5b).

Although the *Challenger* photographs could be purchased, initially from Her Majesty's Stationery Office and later from an established photographer entrusted with the collection, it is unfortunate that available printing techniques in the United Kingdom appeared to have limited their circulation. Whilst the expedition was in progress and for the period immediately after, engravings were the usual form of visual presentation for periodicals, as may be seen from the reports and engravings in the ILN. The craftsman preparing the final engraving was therefore the ultimate arbiter of the image to be published. These weekly journals did not begin to use photographs until the last decade of the 19th century, the same time as newspapers started to use half-tones. Daily use of photographs did not take place until about 1903.

The main period of exploration of the Antarctic continent, was to begin about 20 years after the *Challenger's* voyage. By then, photographic techniques

had been greatly refined and graphic printing techniques were being improved and extended. The *Challenger's* photographs of ice would be surpassed, especially by the studies made by Ponting, the 'camera artist' of the *Terra Nova* (1910–12), but the achievement of both taking and developing these early images in extreme conditions should not be forgotten.

As far as the *Challenger* expedition is concerned, no clear conclusions can be drawn about the relationship between art and photography. Whilst there are photographs and illustrations of the same scene, with similar geographic features in both, it cannot be categorically stated that the professional artist Wild regularly used prints to produce sketches. Only two of Shephard's sketches bears any relationship to photographs, those of leaving Madeira, and Royal Sound, Kerguelen, (Shephard's illustrations 3 and 25 with Brunton's photographs 71 and 313) and these could easily have been achieved by both the amateur artist and the photographer using the same viewpoint.

However, there is no doubt that a photograph was used in the production of the colophon. Onto an accurate reproduction of the iceberg was added an image to suggest daring adventure, the romance of exploration. Jacob's view may therefore be supported by this image and the illustrations in the ILN, but they were the works of interpreters, almost certainly divorced from any southern ice by many thousands of miles and probably intent on the romantification of their subject.

All the artists who went south before the 1950s were members of expeditions with distinct aims such as exploration, resource evaluation or scientific study and the artistic results reflected their context. The *Challenger* was no exception. The range of work executed on board was commendable: the detailed studies by Wild, as the trained artist, should be seen with the proficient paintings and drawings by a number of gentlemen amateurs, as well as the naive water-colours of the cooper. All were clearly fascinated by ice and attempted to portray this dominating, yet perpetually moving and disintegrating element of the Southern Ocean.

Postscript on Arctic Photographers

During the later stages of this study's preparation, a detailed examination of early photographers of the Arctic was published (Wamsley & Barr, 1996), which provided an interesting comparison to the *Challenger* photographs. The earliest northern works date from Belcher's expedition (1852–54) to search for Franklin, but by the 1870s, photography had been extensively used in the Arctic. There had even been one private 'art expedition' by William Bradford, an American artist with seemingly considerable financial resources. In the summer of 1869 he engaged two professional photographers and, together with an experienced Arctic traveller, went to Greenland, exposing between 300 and 400 glass plates. The account of the voyage which appeared in 1873 was: 'the first published work to include photographs of the Arctic' (Wamsley & Barr, 1996, p. 307) and Bradford later used some of the images for oil paintings.

Acknowledgement

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Postscript—a request for information

Wild was clearly a capable artist and it would be of interest to discover more about him as well as identifying further works by him.

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