Davis' career intersected with that of Mawson, in general with reasonable harmony, but on the last of Davis' voyages there were serious disputes between Mawson, the leader of the expedition and Davis, the master of the ship. Davis did not participate in the BANZARE voyage of 1930–1931, during which there were similar difficulties between master and leader. These disputes arose from the disparate roles of the two, and to some extent the case against Davis has gone by default with the publication of Grenfell Price's 1962 book *The winning of Australian Antarctic: Mawson's BANZARE voyages 1929–31* and of Mawson's diaries (Jacka and Jacka 1988). Therefore this book, setting out Davis' diary entries for the Antarctic sections of his voyages, is most welcome from the point of view of redressing the balance. But this is only a minor aspect of the volume, in the totality of which the reader is led to appreciate how remarkable a man Davis was. In the words of Mawson himself, he was 'God fearing...kind, trustworthy and courteous.'

This is a splendid edition of Davis' papers, which will serve as a model for all those who attempt similar work. Edited diaries tend to fall into two categories: those in which the editor almost submerges the text in critical apparatus and personal opinion and those in which the editor's impact is so slight as to be almost unnecessary. This edition avoids both hazards. The character of Davis is clearly evident from his writings, which constitute the bulk of the book, while the editor places them into context in a most satisfactory way. She has immersed herself in her subject, and the editorial apparatus, while relegated to its proper place, is formidable both in quantity and quality.

After a general chapter entitled 'The making of an Antarctic seaman,' in which Davis' career is outlined, there is a chapter for each of the voyages. In each case there is an introductory essay by the editor. These vary in length from a few paragraphs to several pages in the case of the Ross Sea Relief Expedition, for which it was necessary for her to go into some detail about the convoluted and acrimonious negotiations that led to Davis' appointment.

After each introduction, the text of the diaries is presented with only slight amendment, most particularly with regard to the punctuation that in the original was, as the editor notes, 'sparse.' In his somewhat terse style, Davis reveals himself as thorough, meticulous, and somewhat introverted. One can understand why he was referred to, by many, as 'Gloomy Davis.' He uses the privacy of his diary to comment on the shortcomings of his subordinates, who obviously in some cases did not have the same high standards as did Davis himself, and of the expedition staffs, including their leaders, particularly Mawson. At the end of the chapter for each voyage, the editor gives full references not only to the entries in Davis' diaries but also to the other sources, both archival and secondary, to which she has referred. A perusal of these indicates the thoroughness with which she has approached her work. There is a final chapter entitled 'Aftermath,' in which she sums up events following the return of *Discovery* in 1930.

In addition to the text, the book includes a very large selection of contemporary pictures. These are set out on 37 pages, and while some are familiar, many are not, and in themselves, they constitute a valuable resource. At each end of the book is a track chart for the voyages. The only serious deficiency in the work is that one would have welcomed larger scale maps of some of the places referred to in the text, for example Commonwealth Bay, where important incidents took place. There is a comprehensive index together with a list of members of all the expeditions. There are a couple of slips here: the Australasian Antarctic Expedition becomes the Australian Antarctic Expedition, and the Ross Sea Relief Expedition bears the dates 1917–17. Surprisingly, the editor omits Shackleton himself on the Ross Sea Relief Expedition list, although she does in the text explain his supernumerary position.

The presentation of the book is most attractive and up to the high standards one has come to expect from the publishers. The dust jacket has the well-known photograph of *Discovery* held up in pack ice, and is in itself designed to appeal to the prospective purchaser.

To conclude, an excellent book, and one that should be read by all with interests in the expeditions in which Davis was involved. The editor and publisher are to be congratulated. (Ian R. Stone, Laggan Juys, Larivane Close, Andreas, Isle of Man IM7 4HD.)

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DRAWING SHADOWS TO STONE: THE PHOTOGRAPHY OF THE JESUP NORTH PACIFIC EXPEDITION, 1897–1902. Laurel Kendall, Barbara Mathé, and Thomas Ross Miller. 1997. Seattle and London: University of Washington Press; New York: American Museum of Natural History. 112 p, illustrated, soft cover. ISBN 0-295-97647-0. £22.50.

This volume accompanied the American Museum of Natural History exhibition 'Drawing shadows to stone: photographing North Pacific peoples, 1897–1902,' which ran between 14 November 1997 and 1 March 1998. The exhibition marked the centenary of the museum's Jesup North Pacific Expedition (1897–1902), and both exhibition and book took their title from the turn-of-the-century Yukaghir people of northeastern Siberia. Many Yukaghir had never before experienced the glass-plate, tripod cameras that they were to call 'the three-legged device that draws a man's shadow to stone' (page 33).

The Jesup Expedition provides an early example of an anthropological enterprise that appropriated and assimilated photography as a form of collecting and as essential anthropological practice. Both exhibition and book explore the processes at work in turn-of-the-century photographic representations of anthropological subject matter.

https://doi.org/10.1017/S0032247400025869 Published online by Cambridge University Press

This important process of reconsideration has a wider significance—stimulating much-needed revisionist interpretations of collected cultural artefacts in museum cases, as well as those on glass-plate negatives.

The text comprises two main essays and gives careful consideration to the mutable process of 'reading' photographic images, from the time of their first exposure, to present-day reinterpretations of the same (now culturally decontextualised) material. With the 'Drawing shadows to stone' exhibition now at an end, it seems fitting that the book/artefact of the same title demonstrates a similar process. It has lost part of its own original context and arguably changed emphasis from interpretative exhibition guide to the status of academic monograph.

The first essay, by Stanley A. Freed, Ruth S. Freed, and Laila Williamson, entitled 'Tough fieldworkers: history and personalities of the Jesup Expedition,' is a biographical fleshing out of the characters, priorities, and inter-museum rivalries that fuelled and shaped the expedition. The essay supplies important historical underpinning while illuminating and locating the expedition's aims and objectives in their late-nineteenth/early-twentieth century contexts.

The second essay, entitled 'Drawing shadows to stone' and written by Thomas Ross Miller and Barbara Mathé, shifts emphasis from the broader expedition contexts to the expedition itself. It aims to consider the politics of photography as a representational medium, record of events, and aide-mémoire for designing museum displays. As the essay argues, idealised subjects and practices were often decontextualised by the use of blank backgrounds, while other images were deliberately altered (pages 20, 28). 'Typical' scenes of everyday life were sometimes imbued with archaic cultural practices to suit the taste of expedition photographers who preferred traditional dress and native implements to their often already fully assimilated western successors (page 29).

Cultural contact, the authors argue, was often effaced from many photographs (page 29). In some photographs the deception was made plain, but we can only guess at the manipulation of other images. The authors' observations need locating in the context of the actual making of the image, where such 'fakery' gains further dimensions. The taking of a photograph will always create a distancing of subject from photographer, but it should also be noted that the act of pointing a camera at a subject, and inscribing that image onto the negative, also supplies its own implicit proof of contact between the photographer (almost exclusively from western cultures) and the subject (nearly always native peoples).

The essay falls noticeably short of a sustained discussion that traces the image-making process back to its origin and the photographic equipment itself. In fact, consideration of the act of photography, and the photographic apparatus employed by the expedition, is confined to a single page (page 33). Some limitations of expedition cameras are given throughout the text, but there is no systematic consideration given to the variety (or lack of variety) of types of camera, their capabilities, or how significantly equipment may have affected the process of representation.

Camera makes, models, lens-types, and shutter configurations are noticeably absent, the difficulties of exposing glass-plate negatives in the field are never mentioned, and no adequate attempt is made to locate the expedition's choice of equipment in wider cultural, photographic, or anthropological contexts. Such omissions prove to be the major deficiency of the second essay and the book as a whole. Without such information, there could be a tendency to assume that photographs were posed and native representations constructed solely because of turn-of-the-century anthropological practices. Yet the process of representation may well have evolved the other way round, as the constraints of equipment could have shaped anthropological techniques of representation.

The authors do suggest that expedition photographers compensated for their 'flat...two-dimensional medium' by 'pictur[ing] an individual from several angles' (page 25), but they do not consider the expedition's dearth of interest in the advantages of other photographic equipment/processes. Stereoscopic camera equipment (readily available since the 1860s) was apparently ignored. These cameras at least offered the illusion of three-dimensional images, by simultaneously exposing two plates from slightly different angles and then placing the images into a special viewer to create a 3-D effect. Models such as Murray and Heath's Stereoscopic Camera offered fine detail and stereo exposures on 9 x 17 cm wet plates. By 1898, Stereo Crafters of Milwaukee, Wisconsin, offered the Stereo Jumelle de Joux, capable of a dozen 6 x 13 cm exposures, and J.F. Shew & Co of London could supply the truly versatile Stereoscopic Eclipse (*c* 1891–1900), capable of 8.25 x 17 cm exposures and with a removable partition for non-stereoscopic use.

The authors of the second essay seem content that the reason the expedition opted for 'bulky photographic equipment...[that] was difficult to transport and set up,' and cameras that required the use of tripods and a separate glass-plate for each exposure,' was that 'large-format view cameras...were capable of producing greater detail and a finer image than were the smaller Kodaks' (page 33). Yet, the authors' tantalising assertion that use of the 'hand-held box camera [that] had been in use since the early 1890s,' was considered 'amateur' (presumably by expedition leaders/photographers), offers the possibility of a fuller explanation. In the context of the expedition, the opportunity to develop the distinction between amateur and professional is wasted.

George Eastman's small, easy-to-use, hand-held, lightweight Kodak (first marketed in 1888) was not only more obviously suited to expedition conditions, but, since 1889, had also used celluloid roll film. This advance obviated the previous developing process that necessitated stripping the negative coating from the film and transferring it to

https://doi.org/10.1017/S0032247400025869 Published online by Cambridge University Press

glass plates. The benefits of Kodak equipment and new film technology were abundant. The smaller Kodaks (quicker to operate and with the fast frame advance of roll film) would have provided a greater range of photographic possibilities for the expedition's photographers: from static posed images to action and impromptu photography. In contrast, all expedition images demonstrate a high degree of control over subject matter. Expedition cameras actually created a need to pose material. Each exposure required advance planning as spontaneous photography was denied by the heavy, comparatively immobile, tripod-mounted cameras. Even if greater image detail was a powerful consideration in camera choice, one still has to ask why different camera types could not have been used in a complementary capacity.

The choice of expedition camera equipment needs to be firmly located in the contexts of expedition politics and encounters with native peoples. This reveals that at least four main issues of authority, professionalism, displays of power, and technological marvel/magic, may have dictated choice. First, the smaller, hand-held Kodak cameras were viewed as 'amateur' equipment, and thus the images produced lacked the authority of professional equipment. Second (and in the context of pre-expedition, inter-museum rivalry between the American Museum of Natural History and Chicago's Columbian Museum), use of amateur equipment would have exposed the Jesup North Pacific Expedition to the charge of a lack of anthropological professionalism. Third, one has to consider the process of technological display. Large, complicated cameras would impress native audiences with a greater sense of the importance of their operators than small, easy-to-use, equipment. Awesome equipment that evoked a state of wonder probably made native peoples more cooperative in the process of image-making. Finally, the effect of the camera as a form of magic ('the three-legged device that draws a man's shadow to stone') would doubtless be enhanced by large-scale equipment and the procedure for making an exposure. Unlike the simple Kodak box camera, the pre-focusing of plate cameras even required the photographer's head to disappear under a black cloth as in many a magic trick. In this context, it is also worth noting that native peoples explained expedition photographs by 'saying that a small man who imitated people's voices lived inside the box' (page 38).

Consideration of expedition technology reveals a representational process that can be understood as a series of multi-layered filters and magnifications through which the image travels. Although the authors do touch upon such a process (pages 38, 40), their account of how native images were created and manipulated by expedition photographers recognises only one or two transmutations in a complex of transformations. To complete the picture, it is crucial not only to discuss how native peoples were represented by anthropologists/expedition photographers, but also how the expedition created its own self-images. Only by taking into account how the expedition represented itself can one begin to explore how those representations might have altered the natives' initial representations of themselves.

Overall, *Drawing shadows to stone* is a rewarding and important study. Its analyses of image representation unquestionably reinforces the significance of the Jesup North Pacific Expedition in the history of anthropology and as central to a cyclical process of cultural history that spans birth, growth, decay, and re-birth. At the end of the last century, the expedition members believed that they were 'salvaging' (pages 22, 24) the last remnants of the rapidly westernising indigenous cultures of the North Pacific. Now, nearing the conclusion of the millennium, the expedition's photographs and collections are the focal point and guide for a cultural re-birth among the Yukaghir people. It is an irony indeed that the western culture that, arguably, did so much to change the Yukaghir peoples' way of life, should now offer the key to recreating native traditions and the renewal of a traditional Yukaghir culture. (Ian N. Higginson, Centre for History and Cultural Studies of Science, School of History, University of Kent at Canterbury, Canterbury, Kent CT2 7NX.)

BRIEF REVIEWS

HUMAN ECOLOGY AND CLIMATE CHANGE: PEOPLE AND RESOURCES IN THE FAR NORTH. David L. Peterson and Darryll R. Johnson (Editors). 1995. London and Washington, DC: Taylor & Francis. xxiv + 337 p, hard cover. ISBN 1-56032-404-X. £39.95.

It has become a commonplace remark amongst natural and social scientists that the circumpolar north is a natural laboratory for studying global environmental issues. Although global environmental change is not a late-twentieth century phenomenon, current concern stems from our awareness of both its systemic and cumulative effects and its level and extent. As international concern grows over the effects of long-range transportation of atmospheric pollution, global warming, ozone depletion, and further industrial development, increasing numbers of reseachers are investigating the human dimensions of environmental change. This collection of 22 papers addresses some of the challenges facing the environment and remote indigenous communities of the circumpolar north at a time when international effort is directed at designing and implementing workable environmental policies.

The various contributors are biologists, sociologists, anthropologists, and resource managers. The focus is on northern North America, although most chapters discuss connections between climate, ecosystems, and human populations in Alaska. Peterson and Johnson set the scene for subsequent discussion with a summary of the volume's overarching themes — the relationship between human ecology and climate change, and between human populations and resource management. While some papers discuss the potential impact of climate change on northern landscapes (Ferguson) and terrestrial and marine mammals (Gunn, Ono), others consider the likely conse-

https://doi.org/10.1017/S0032247400025869 Published online by Cambridge University Press