

devoted to breeding. But perhaps the most interesting conclusion is the similarity of the RE of immature breeders to mature breeders, contrary to expectations, given the lower reproductive success of subadults. Deutsch *et al.* propose that there may be an RE threshold below which fitness costs are minimal, or that there are fitness benefits to early-born offspring in an expanding population, or that the early experience of reproduction may confer an advantage in later matings.

The diving and foraging section is the largest, containing seven chapters on subjects as diverse as the geolocation of elephant seals by light levels, and the functional analysis of dive types by female northern elephant seals. Hill's chapter on geolocation takes on board the difficulties in tracking elephant seals, given their long-range foraging strategies. Geolocation is the process whereby the precise position of a seal can be determined by the recording and storing of light levels. The local apparent noon (the moment midway between dawn and dusk) will determine longitude, and the length of the day will determine latitude. Each time a seal surfaces, the time and date can be used in conjunction with light level to determine the location of the seal, using standard navigational equations. There are problems with this method, especially for monitoring southern elephant seals. Longitude obviously cannot be calculated at times of the year when there are no identifiable dawns and dusks, and it is impossible to determine latitude near the vernal and autumnal equinoxes (because the 'circles' of dawn and dusk are close together or overlap). Despite the apparent drawbacks of this technique (although latitude may be fixed by using alternative methods, such as sea-water temperature, during the equinoxes) a geolocation feature is relatively easily fitted into a time-depth recorder, and might provide valuable supporting data for tracking a seal's movements.

The remaining six chapters concentrate on diving behaviour in relation to foraging strategies, swim speed, age, sex, body mass, and reproductive condition of both species. These represent some of the most exciting advances made recently in the study of marine mammals, using state-of-the-art technology, and providing data that fill gaps in the understanding of the biology of diving and marine foraging. Le Boeuf's chapter examines the differences in diving patterns between different cohorts of northern elephant seals, while Slip *et al.* analyse dive types in the southern elephant seals from Macquarie Island. Thorson *et al.* assess diving in northern elephant-seal pups; they found that within 10 weeks there are profound changes in the physiology of these animals, specifically relating to diving. These include an increase in mass specific blood volume, a 46.7% increase in oxygen stores, and a 50% decrease in diving metabolic rate.

The final section contains four papers relating to elephant-seal physiology. Castellini compares the physiology of sleep apnea to the physiology of diving, and suggests that a better understanding of sleep apnea, far more easily studied than diving, might provide valuable insights into the changes that occur during diving. Breed-

ing energetics information about southern elephant seals is assessed by Fedak *et al.* Like the research by Deutsch *et al.*, the data collected by Fedak *et al.* indicate that there is no difference in maternal investment between male and female pups once female size and birth weight are taken into account. Fedak *et al.* also suggest that the long distances travelled by females on foraging expeditions may be due to the advantages conferred by a reliable source of food 'in a long-lived uniparous animal' (page 354). It is also noted that the characteristics of dives change in relation to the depth of the ocean, underwater topography, and the average daily speed of the animal. Kirby and Ortiz review the current information pertaining to the physiology of fasting, specifically referring to hormonal changes, while Bryden's research assesses the changes that occur in the endocrine system in newborn southern elephant seals.

Laws and Le Boeuf have edited an excellent compendium of papers, notable not only for the high quality of research, but for the wide range of topics covered. There is, perhaps, a bias towards the northern elephant seal, but this doubtless reflects the more extensive research that has been conducted on the northern species than the southern, due to the fact that it is more readily accessible. Elephant-seal research began in earnest in the 1940s and 1950s, and continued apace until the early 1980s, when advances in technology meant that these animals could be studied at sea, as well as during the breeding and moulting seasons. Because of the development of new methods of investigation, it was high time a book on recent and on-going research on elephant seals made its appearance. *Elephant seals* more than fulfils this need, not only outlining past research and data, but highlighting questions and problems that still need to be addressed. Throughout the book, there is a feeling that the questions raised will be answered, and that future research needs have already been identified. This makes *Elephant seals* an exciting book to read, and it will undoubtedly prove to be a standard reference text for the study of marine mammals. (E. Cruwys, Department of Zoology, Downing Street, Cambridge CB2 3EJ.)

THE DESTRUCTION OF NIKOLAEVSK-ON-AMUR: AN EPISODE IN THE RUSSIAN CIVIL WAR IN THE FAR EAST, 1920. A. Ya. Gutman. Translated by E.L. Wiswell. Edited by Richard A. Pierce. 1993. Fairbanks and Kingston, Ontario: Limestone Press. xxxiii + 395 p, illustrated, hard cover. ISBN 0-919642-35-7. US\$28.00.

This book is a most welcome and timely translation of a work first published in a currently obscure and inaccessible edition, in Berlin in 1924. It concerns the 'Nikolaevsk incident,' which was the ostensible reason for the occupation of northern Sakhalin by Japan from 1920 to 1925. The occupation ended under the Soviet-Japanese Convention of Peking, but the Japanese retained important concessions in the territory, notably coal and oil, and these assisted them in their military build-up during the 1920s and 1930s.

Nikolaevsk is a port situated on the left bank of the

Amur river in Siberia, some 40 km above its entry into the Sea of Okhotsk, adjacent to the Nevelskoi Straits that separate Sakhalin from the mainland. The town had a population of approximately 12,000 people in 1918 and was relatively little affected by the introduction of Soviet rule in that year. This, however, was short-lived, since the Japanese landed a substantial force at the town on 8 September 1918 in order to protect Japanese civilians resident there. This was, of course, part of the allied intervention in Russia towards the end of the First World War. The Japanese established a garrison and this, together with a small force of pro-tsarist White troops, enabled normal life to continue. However, Bolshevik partisan groups were active in the region under the command of Yakov Triapitsyn. His origins were obscure but, according to the author, he was aged between 26 and 28, and had been sent to the far east as an organiser of the partisans. He had a number of senior associates, including Nina Lebedeva, who was in charge of propaganda.

Triapitsyn decided in January 1920 to attempt to take the town. After a preliminary skirmish with White and Japanese troops, Triapitsyn's forces surrounded Nikolaevsk and negotiations for a surrender commenced. These were fairly protracted since obviously neither side trusted the other, but the White situation turned from serious to hopeless when it became clear that the Japanese high command had ordered its garrison not to interfere provided that law and order was maintained. The Whites accepted the Bolshevik terms, which provided *inter alia* for the protection of personal property and guarantees that the population was not to be subject to ill-treatment.

The entry of the Bolshevik forces took place on 28 February 1920 with a, no doubt, fearful population present to receive them. The town was decorated with red flags and the people wore hastily prepared red rosettes or bows.

Despite the promises, a reign of terror was started immediately, with summary executions, confiscations of property, and other atrocities of the sort with which the world has become painfully familiar. Triapitsyn was, however, unable to have his own way completely due to the presence of the Japanese garrison, which was now uneasy because the arrival of the Bolsheviks interrupted its means of contact with its headquarters at Khabarovsk. The strength of the garrison was some 300 men, and they were outnumbered at least ten to one by the Bolsheviks. The Japanese appear to have demanded to no avail that Triapitsyn adhere to the terms of the surrender. For his part, Triapitsyn seems to have decided that the Japanese garrison must be eliminated as soon as possible, because, with the advent of spring, the frozen Amur river would again become available for navigation by the Japanese Navy, with possible reinforcements being transported to the town. He therefore decided to provoke the Japanese to attack him, by issuing an ultimatum, on 10 March 1920, that the garrison voluntarily disarm itself, terms to which Triapitsyn was certain the Japanese would not agree.

His calculation was correct and at 1 AM on the morning

of 12 March the Japanese attacked the main Bolshevik positions. After fierce fighting, during which casualties on both sides were high, the few surviving Japanese soldiers surrendered on receipt of a document from both the Soviet and Japanese commands requiring that the fighting should stop. This availed them nothing and the Japanese civilian population, together with the few remaining military survivors, were killed during the next few days. In all 700 Japanese met their deaths.

Triapitsyn was now free from restraint and set about systematically eliminating any of the population that could conceivably have represented a threat. One of the main methods for doing this, ammunition being in short supply, was to stab the victims with a bayonet and thrust them through a hole in the ice of the river. By these and other equally atrocious means several thousand people were killed.

However, news of the fate of the Japanese soon reached their headquarters and the homeland, where it caused widespread outrage and demands for revenge. The Japanese freedom of action was circumscribed by the international situation and, in particular, the fact that the Americans, who were deeply suspicious of Japanese motives, still had forces in Vladivostok. However, when the US troops withdrew in early April 1920, the Japanese were able to take whatever action they thought fit with little fear of outside intervention or even notice.

The Japanese forthwith took over control of Vladivostok and Khabarovsk and became *de facto* rulers of the entire region, including northern Sakhalin. Triapitsyn received news of these developments and decided to seek safety as soon as possible, since it was evident that the Japanese would soon send forces to Nikolaevsk. He decided to destroy the town by fire and to execute all the remaining inhabitants except for the partisans and their families. By the end of May 1920, this had been done. The Japanese arrived on 3 June and instituted a search for Triapitsyn and his men.

In this they failed, but Triapitsyn did not long outlive his victims. Even though he appears, in the initial stages of his action at Nikolaevsk, to have been acting with approval at the highest level, and the author provides support for this view, he was proscribed by the authorities in Khabarovsk, who considered that he had overreached himself with regard to the Japanese. He was found guilty of a series of crimes, among which was 'continually undermining trust in the Communist system,' and he was executed on 9 July 1920.

In preparing the book, the author assiduously collected as many documents as were available to him in his capacity as editor of a Russian newspaper in Tokyo and conducted interviews with some of the very few survivors. Moreover, he had access to the findings of a commission that investigated the matter in the summer of 1920 and that received testimonies from 57 of the fortunate few who escaped. Thirty-three of these testimonies are printed as an appendix to the book and cover some 162 pages. They provide,

in horrifying detail, direct and immediate information on the atrocities committed and of the awful fate that befell most of the inhabitants of Nikolaevsk at the hands of the Bolsheviks.

Yet it must be borne in mind that the author was certainly not an objective observer of events, if, indeed, such could be found in the Russian far east in the early 1920s. He was a passionate anti-Communist and regarded all the partisans simply as cut-throats. Soviet writers admitted that Triapitsyn and his senior colleagues committed excesses but, of course, took a precisely opposite view with regard to the bulk of the partisans. The author nowhere mentions that equally appalling treatment was meted out to the innocent in the region by such White leaders as Grigory Semyenov, Ivan Kalmykov, and Roman Ungern-Sternberg. In this context, it is worth noting that the author points out that several Jews were among those executed and comments that this counters the claim frequently made that the Bolsheviks acted towards the Jews with greater humanity than did the Whites. He makes no mention, however, of such incidents as the massacre, by the Whites, of some 2000 Jews in Yekaterinburg in July 1919.

Despite the author's bias, which is interesting in its own right, the book is to be appreciated as a near-contemporary account of an important incident that took place towards the end of the allied intervention in Russia and one that is either ignored or, at most, barely mentioned in general histories of the period. As well as providing full details of events, the author attempted to place the incident in its overall political context and seems, for example, to have been under no illusion that if it had not occurred, the Japanese would have concocted some other reason to justify their occupation of the region and of northern Sakhalin.

The edition is attractively presented and substantially bound. There is an introduction by the translator, whose family came from Nikolaevsk, and detailed and helpful maps. These include a street plan on which events can be conveniently followed. There are 27 photographs that convey an impression of the town before its destruction; portraits of Triapitsyn, Lebedeva, and their associates; and pictures of the victims, including one of dead bodies washed up on the shore of the river. Inside the cover is a large panoramic photograph of the town after the fire. There are comprehensive notes and a bibliography of Russian and western sources. There is no index. For a work of such limited potential readership and yet so well printed and bound, the price is very modest.

This book will be required reading for those interested in the social structure of Russian towns in the early twentieth century, the history of Siberia in the 1920s, the allied intervention, and the relations between Russia and Japan in the period between the Treaty of Portsmouth (1905) and the Second World War. Its publication will greatly assist the process of reappraisal of views on these matters following the opening of the Russian archives.

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WORKING THE NORTH: LABOR AND THE NORTHWEST DEFENSE PROJECTS, 1942–1946. William R. Morrison and Kenneth A. Coates. 1994. Fairbanks: University of Alaska Press. xiv + 270 p, illustrated, hard cover. ISBN 0-912006-72-2. US\$30.00.

This latest product of a prolific Canadian collaborative partnership examines the experiences of those who worked on the engineering projects designed to defend the exposed North American northwest in the wake of Japan's attack on Pearl Harbor. The northwest encompasses Alaska, Yukon Territory, and the Northwest Territories, as well as northern British Columbia and Alberta. The 60,000 workers in question — who far outnumbered locals and whose 'invasion' marked the region's biggest upheaval since the gold-rush era — were a diverse crew: Canadian and American; military and civilian; black, white, and native; government and private; and male and female. The major enterprises involved were the construction of the Alaska (Alcan Military) Highway and the Canol Pipeline, with its associated road, and the expansion and upgrading of the Northwest Staging Route (a string of airfields). But also included are lesser schemes such as a telegraph/telephone system and the connecting road between the Alcan and the Alaskan port of Haines.

Coates' earlier popular history of the Alaska Highway (*North to Alaska!*) contained material on the road builders' lives, and this book might be considered an extension of that particular angle. Following a useful scene-setting chapter, which outlines the state of northwestern frontier society on the eve of the southern influx, the reader is provided with a comprehensive portrait of everyday life, both on and off duty. Recruitment, logistics, inducements, wages, expectations and impressions of the north, living conditions, white attitudes to minorities, relations with management, and after-hours activities all receive attention. Big-game hunting, for instance, furnished a welcome diversion and respite from dreary army rations. The pursuit of moose and sheep, however, also brought conflict with game authorities and subsistence users. *Working the north* focuses on reciprocal impacts: that of workers on the north and that of the north on the workers — the latter entailing more than just the obvious '3 Ms' (mud, muskeg, and mosquitoes). Adaptation to the north stands out as a unifying thread, not least the problems of labour management in a vast hinterland.

A chapter is devoted specifically to the admittedly small numbers of women and natives involved. Discussion of female workers illustrates how the book provides a wider context — in this case female employment on northern frontiers — yet without undue digression. The authors proceed judiciously and are not in the business of claiming startling changes. They stress that the restricted areas in which native skills and 'local knowledge' were recognized and utilized, such as guiding and packing,