



Review Article

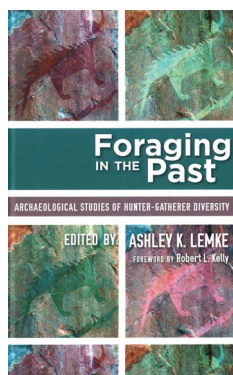
Diversity of forager lifeways in the prehistoric past

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ASHLEY K. LEMKE (ed.). 2018. *Foraging in the past: archaeological studies of hunter-gatherer diversity*. Louisville: University Press of Colorado; 978-1-60732-773-8 hardback \$73.

KRISTEN CARLSON & LELAND C. BEMENT (ed.). 2018. *The archaeology of large-scale manipulation of prey: the economic and social dynamics of mass hunting*. Louisville: University Press of Colorado; 978-1-60732-681-6 hardback \$73.



The underlying theme of *Foraging in the past* is how archaeology can be used to identify the full range of diversity among hunter-gatherers in the absence of ethnographic analogues. In the introduction, Ashley Lemke argues that forager diversity must have been greater in the past than is suggested by comparison with the spatially and temporally restricted ethnographic record of modern hunter-gatherer societies. The deep prehistoric past covers timeframes with no modern environmental analogue, and the subjects of our study include a broader range of human ancestors than just anatomically modern humans. Consequently, archaeologists must use models and hypotheses to identify novel forager adaptations that lack any modern ethnographic equivalent.

In Chapter 2, Raven Garvey presents a comparative analysis of the Unangan of Alaska's Aleutian Islands and the Yámana of Tierra del Fuego to understand better why some foragers may deviate from general patterns identified in cross-cultural ethnographic studies. Foragers at such high latitudes typically have lower cultural diversity, greater geographic ranges and greater technological complexity. Yet the Yámana of Tierra del Fuego coexisted with a greater number of culture groups, occupied smaller geographic ranges and used a less complex toolkit than expected. Garvey draws upon cultural transmission theory to argue that the smaller population sizes of the Yámana may have resulted in the loss of the technological complexity necessary to raise local carrying capacities and improve survivorship at latitudes where foragers must contend with higher basal metabolic rates.

Lemke (Chapter 3) presents data on underwater stone features located on the Alpena-Amberley Ridge in the Lake Huron basin, a geographic feature that was exposed around 11 200–8300 BP as a result of lower lake levels. The stone alignments were oriented to capture caribou en masse during their spring migration, while rock features interpreted as hunting blinds used to conceal one to two hunters were positioned for autumn hunting. This is contrary to ethnographic observations where mass drives of caribou occurred in autumn when animals were in prime condition. Larger caribou populations, combined with the lack of social territorial circumscription during this early period of human occupation in North America, may have allowed a smaller number of foragers to hunt caribou during the autumn.

The following two chapters explore the antiquity of humans in environments previously deemed marginal or restrictive. Kurt Rademaker and Katherine Moore (Chapter 4) find considerable variation in the Terminal Pleistocene and Early Holocene record of high-elevation Andean environments, with foragers probably attracted to this resource-rich area rather than adjacent ecological zones during periods of increased precipitation. Compelling evidence for seasonal residential use suggests that hypoxia and resource limitations did not prevent the extended use of high elevations at an early date. Patrick Roberts and colleagues (Chapter 5) use stable carbon and oxygen isotopic analyses to identify the antiquity of foragers in tropical rainforests, an environment that until recently has been viewed as an obstacle to intensive human occupation in the absence of agricultural support. The presented data demonstrate that foragers relied heavily on rainforest resources in Sri Lanka during the Late Pleistocene and much of the Holocene despite access to open grassland resources.

Brian Stewart and Peter Mitchell (Chapter 6) focus on the temperate region of Lesotho in southern Africa. Cross-cultural observations suggest that foragers in this region are expected to have intensified fishing economies, with reduced availability of terrestrial plants and large game due to cooler climates during the Last Glacial Maximum, the Antarctic Cold Reversal and the Neoglacial periods. The data are generally in support of the predictions, indicating that people and the resources they depended upon became concentrated along riverine corridors, possibly using lower-altitude, more temperate regions seasonally to avoid the need for storage at low latitudes.

The final two chapters evaluate forager diversity in the Middle and Late Palaeolithic. Keiko Kitagawa and colleagues (Chapter 7) examine dietary trends in the Middle Palaeolithic and Aurignacian of Central Europe. Both Neanderthals and modern humans frequently exploited horses for food, but there is an increase in the relative abundance of reindeer remains during the Aurignacian that is likely a reflection of a cooler, more favourable climate for this species. They argue that not all faunal exploitation was guided purely by dietary goals, as some foraging decisions may have been geared towards acquiring bone, antler and ivory. Steven Kuhn and Mary Stiner (Chapter 8) argue that the differences between modern humans and Neanderthals continue to blur with additional research, yet important differences in subsistence and technology suggest that modern humans in the Upper Palaeolithic responded to environmental change using technology whereas Neanderthals changed subsistence resources. While such differences may reflect population sizes and densities, the question remains as to why Neanderthals maintained small populations.

In *The archaeology of large-scale manipulation of prey*, contributors largely focus on the social and economic context of large-scale communal hunts. In the introductory chapter, Leland Bement highlights that large social gatherings must have been underwritten by food surpluses that were perhaps produced through large cooperative hunts, and social hierarchies are expected to appear when participants compete for transient leadership positions.

The following three chapters focus on the recent prehistoric and ethnographic record. María Nieves Zedeño (Chapter 2) argues that the construction of bison-hunting facilities may effectively be tied to the development and maintenance of core areas within Blackfoot territory on the North-western Plains of North America. Specialised bison hunting appears in the region after the introduction of bow-and-arrow technology *c.* AD 1000 when group size increases and mobility decreases, probably supported by large food surpluses and the intensive processing

of bison carcasses. Jane Balme (Chapter 3) describes fish traps and nets used for capturing a wide variety of game animals in Australia, where large migratory animals are absent. Such technologies would have allowed temporary surpluses, which in turn may have supported short-term communal events in a region where evidence for storage is absent. The labour investment in the associated facilities and nets may have demanded ownership, and temporary leadership positions may have arisen to organise mass capture events. Balme speculates that such events could date back at least 30 000 years based on evidence of temporary gatherings such as burial ceremonies that may have been underwritten by temporary surpluses. In Chapter 4, Ulla Odgaard tackles the paradox of empirical evidence for the mass capturing of caribou conflicting with Indigenous perspectives of respect and the conservation of resources. Some sites in Greenland demonstrate low utilisation of caribou parts based on the presence of articulated sets of bones and a lack of evidence for marrow and bone grease exploitation. Odgaard reasons that while some caribou may not have been fully consumed at times, the treatment of the remains still supports a social and reciprocal relationship between forager and prey.

The second half of the volume is primarily concerned with Palaeoindian communal bison hunting in North America. David Maxwell and Jonathan Driver (Chapter 5) argue that our understanding of the variability in bison herd structures is incomplete due to historic circumstances. This prevents us explaining the paucity of juveniles at bison drive sites, which are expected to be present if an idealised bison herd was hunted en masse. The authors highlight the herd structure variability among blue wildebeest, arguing that catastrophic mortality profiles at bison drive sites should mirror such variation and not a single, idealised bison herd profile. Yet no records of the extremely low numbers of juveniles are present for wildebeest, suggesting unexplored natural or cultural processes at play. Adam Graves (Chapter 6) serially sampled bison teeth for stable isotope analysis to identify Folsom-aged *Bison antiquus* herd movement on the Southern Plains. He compares this with movement of flaked-stone sources to argue for occasional social aggregations. Graves highlights that the quantity of meat acquired could not have been reasonably processed and transported to another location, and therefore drives may not have been solely for food acquisition. Instead, he suggests that Palaeoindian bison drives supported social aggregations necessary among highly mobile groups to facilitate information exchange, finding mates and social rituals. Using stable light isotopes, Kristen Carlson and Leland Bement (Chapter 7) identify shifts in bison mobility patterns through time in the Southern and North-western Plains. They highlight that communal drives continued despite changing bison-mobility patterns, presumably reflecting the advantages of such methods during the Palaeoindian period.

John Speth takes the role of discussant in the final chapter where he questions many of the assumptions inherent in arguments regarding Palaeoindian lifeways. Speth argues that projectile-point technology is not essential for successful hunting, biface technology is not required for high levels of mobility, and high-quality toolstone is not necessary for lithic technology. Further, communal drives were unlikely to have occurred for subsistence reasons alone. Instead, communal drives and exotic toolstone are more likely to represent prosocial behaviour at rendezvous points. Speth frequently brings gender into his arguments, emphasising the probable role women played in Palaeoindian lifeways, and implicitly arguing that the female toolkit may be a clearer representation of mobility.