

r driving, providing a
ism for controlling the
pace and direction of
nt. Bit wear on horses'
therefore offers an
or identifying the use
s as transport. Since
were not invented be-
0 BC, a bitted horse
than that could only
en a mount.

gh a bit is intended to
n the soft tissue in the
mouth, horses can and
e bit off these sensi-
as onto their teeth,
rly their premolars.
ge strength of the
mandibular muscles
he bit on the teeth
wear marks.

ny and Brown com-
he premolars from
lay domestic bitted
with those from
day feral horses that
r worn bits. Using the
electron microscope
tified and clarified the
distinguishable from
oth wear. They then
t looking for these
n teeth unearthed at
ogical sites in Iran and
ine. They concluded
eback riding did, in
nate in the Ukraine in
00 BC, several centu-
re the advent of the

—K.McG.



Middens or Nests?

A small furor has erupted in archaeological circles with claims that the large and spectacular shell mounds that dot the northern Australian coastline were built not by humans but by birds. For decades, it has been widely believed that they are middens of Aboriginal origin—huge waste dumps built up over centuries by generations of Aborigines on a shellfish diet.

Questions about the origins of the mounds have been raised most recently by Tim Stone, a postgraduate student in the Geography Department of the Australian National University. Stone argues that the mounds have been scraped and raked together by generations of Orange-footed Scrubfowl (*Megapodius reinwardt*). He claims the coastal mounds bear a "striking resemblance" to the large shell and earth nests of the Northern Territory, which ecologists describe as scrubfowl incubation nests. According to Stone, the coastal mounds have long been abandoned by the scrubfowl, and the organic matter they would have contained to provide the heat for egg incubation has decayed.

Stone says the Aboriginal origin theory for the mounds has grown in spite of claims by Aboriginal people, both historically and today, that birds are responsible for the mounds. Prehistorians have been too eager, he argues, for Australia to have its own archaeological monuments.

Although some of the mounds contain Aboriginal artefacts, Stone suggests these have been raked in by scrubfowl or could have been left by Aborigines camping on the mounds. In fact, Stone goes on to argue that archaeological interpretation in Australia should pay more attention to interference by birds at prehistoric sites. The removal and relocation of artefacts by birds may have skewed the archaeological record in more than one instance.

Stone's theory has many critics within the archaeological establishment. Among them are Cambridge University archaeologist Geoff Bailey, who has examined more than 300 of the Weipa mounds, and Roger Cribb, a prehistorian attached to the Alice Springs



DOOR LARHMOILA, AUSTRALIAN PIC LIBRARY

Large shell mounds in the Weipa area of Cape York.

Central Land Council.

Bailey asserts that: "Only someone who had not visited the area or who knew nothing about archaeological field observation would be fooled into confusing [middens and scrubfowl nests]". Cribb, however, admits that it is possible to "confuse" the two. He describes four types of mounds from the Cape York area: middens, oven mounds, shell mounds and 'mounded middens' (which appear to be either scrub hen mounds incorporating archaeological material or archaeological features reworked by scrub hens). However, Stone argues that these are not different types of mound, just one type of mound with different kinds of sediment.

Despite the criticisms from the archaeological fraternity, Stone's theory has received support from biogeographers

and geomorphologists. The natural habitat of the Orange-footed Scrubfowl is monsoon vine forest, and the distribution of the mounds that Stone claims to be discarded nests ties in with evidence of past distributions of this kind of forest.

Further work in progress by Stone has shown that shells from all levels of one particular mound are the same radiocarbon age, which means they did not accumulate gradually as would be expected if they were deposited by generations of Aborigines. Stone now believes the mounds are deposits of coarse shell gravel left by the sea as the shoreline built out over the past 2,000 years, and that their conical shapes can only be explained in terms of subsequent scrubfowl activity. Stone's latest findings are yet to be published. When they are, though, it will be very interesting to hear how his critics respond.

—K.McG.

GIVE



World's
selling
the wo
map a

1. Silva 15T R from the world's waterproof and 1° pinpoint accuracy sapphire jewel-roner scales. B with adjustable Instructions bo
2. Be Expert of map and cor The A-Z of our adventurer level a new section of event, etc. etc.

3. Special off Be Expert with

* When ordering compass handle To order send on

ORIE 44 Alexandra Pl

Please forward

If possible to Mr. Chas B. Blandford

Cardholder's

Cardholder's

Signature