

Re: Proven facts (Re: Savanna hunters run down kodus (Re: AAT all washed up(WARNING: graphic photo)

Re: Proven facts (Re: Savanna hunters run down kodus (Re: AAT all washed up(WARNING: graphic photo)

Source: <http://sci.tech-archive.net/Archive/sci.anthropology.paleo/2007-08/msg00073.html>

- *From:* nickname <alas_my_loves@xxxxxxxxxx>
 - *Date:* Thu, 02 Aug 2007 16:07:57 -0700
-

On Jul 25, 2:43 pm, Lee Olsen <paleoc...@xxxxxxxxxx> wrote:

On Jul 24, 11:51 pm, Marc Verhaegen <m_verhae...@xxxxxxxxxx> wrote:

Op 25-07-2007 04:18, in artikel
1185329931.814552.235...@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx, Lee Olsen
<paleoc...@xxxxxxxxxx> schreef:

On Jul 24, 4:32 pm, Marc Verhaegen
<m_verhae...@xxxxxxxxxx> wrote:

Op 25-07-2007 00:29, in artikel
1185316196.934571.26...@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx, Lee Olsen
<paleoc...@xxxxxxxxxx> schreef:

PAs
usu.look
only to the
fossil &
archeological
evidence
when they
reconstruct
human
evolution,
but fossils
are scarce &
incomplete,

Re: Proven facts (Re: Savanna hunters run down kodus (Re: AAT all washed up(WARNING: graphic photo)

Re: Proven facts (Re: Savanna hunters run down kudu (Re: AAT all washed up(WARNING: graphic photo)

fragmented
pieces of
bone
without soft
parts,
frequently
of uncertain
relation to
living
species;
often,
species, age
& sex are
unknown;
sometimes
the
geological
age &
paleo-environment
are
uncertain.

Liar, you made that up.

Don't be ridiculous.

Says the man who thinks mountain beavers are semi-aquatic
(TREE
2002:213–214). Lee–Thorp correctly thrashed tooth– wear
data. So did
you when you claimed in TREE that mountain beavers ate
the same type
food as capabaras,

Liar:

Liar:

Verhaegen et al. (2002:213–14):
"Tooth microwear studies indicate that
Australopithecus afarensis molar enamel had a
glossy polished surface that is typical of the molars
of capybaras Hydrochoerus hydrochaeris and
mountain-beavers Aplodontia rufa [24].

Re: Proven facts (Re: Savanna hunters run down kudu (Re: AAT all washed up(WARNING: graphic photo)

Re: Proven facts (Re: Savanna hunters run down kudus (Re: AAT all washed up(WARNING: graphic photo)

Both these semi-aquatic rodents feed mainly on riverside herbs, grasses and the bark of young trees."

Marc Verhaegen, Pierre-François Puech and
Stephen Munro
Aquarboreal ancestors?
TRENDS in Ecology & Evolution Vol.17 No.5 May 2002

Only illiterates think a mountain beaver is semi-aquatic. http://wdfw.wa.gov/wlm/living/mtn_beavers.htm

Since capybaras are semi-aquatic (have partially webbed feet) and mountain beavers are terrestrial (do not have webbed feet), then it follows (since neither has the same diet) any similarity between tooth wear of these two animals is purely coincidental and has nothing what-so-ever to do with demonstrating an animal is semi-aquatic. This makes a moot point of the polish observed on Australopithecus afarensis teeth in trying to make a case for it eating "swamp herbs" , since terrestrial animals like the mountain beaver also have "glossy" polish on their molars and do not eat "swamp herbs"

There is another problem to consider, if the research on mountain beavers is sloppy in this paper, perhaps the tooth wear study cited is no more accurate, since one of the authors of TREE 2002 paper is also cited for the tooth wear data [24]. A real research paper would have cited at least three independent sources. Citing your own work only is circular and a cheap trick.

One reason this amateur paper is in the "opinion" department of TREE, rather than accepted as original research, is because of the ridiculously sloppy work demonstrated above. Who peer-reviewed this nightmare of mis-information anyway, a local kindergarten class?

<http://www.scienceinAfrica.co.za/2001/december/hominids.htm>

Dr. Lee-Thorp correctly points out:

1) For instance, the giant molars of the Australopithecines suggest that they needed to process very tough food (see figure to the right) (Ungar, 1998). But phylogenetic history also plays a role in tooth morphology, and adaptations are not necessarily the same as actual behaviour. For example, Papio baboons have tooth shapes indicative of fruit diets, but many modern baboons eat as much as 50% grass for which they are poorly equipped. The problem is worse in animals that are 'generalists' (ie. can eat a bit of everything) like hominids.

Re: Proven facts (Re: Savanna hunters run down kudus (Re: AAT all washed up(WARNING: graphic photo)

2) Some foods leave microscopic traces on teeth. Certain diets such as those rich in hard fruits or grasses leave tiny distinctive damage patterns on enamel surfaces. Based on different microwear patterns, Fred Grine suggested that *Australopithecus africanus* ate a diet with fleshy fruits and leaves, while *A. robustus* ate harder, more fibrous foods (Grine, 1981). Unfortunately microwear only reflects the consistency of foods eaten in the last few days or weeks, and many foods, such as animal flesh, are "invisible". Scatters of stone tools and animal bones in former living sites can provide some clues about how food was acquired although the stone tools do not tell us much about diet.

3) None of the hominids analysed so far ate a diet like that of the modern chimpanzee, gorilla, or even orangutan, all of which eat nearly 100% C3 foods. This is not to say that they did not eat fruits and leaves – they most probably did. But they also ate quantities of actual grasses, or animals that ate the grasses, or both. Grass itself is difficult to process and to extract the nutrients (unless one is well-equipped to do so, like a cow), so it's difficult to visualise how such a large "grass" signature could occur unless the hominids ate some animal foods. C4 –consuming invertebrate and vertebrate animals were abundant and easily collected by hominids. Raymond Dart was on the right track all those years ago, even if his environmental scenario was not quite right!

The important point is that we now know that all of these hominids were willing to eat C4 resources that are generally ignored by our primate cousins, the chimpanzees, gorillas, and orangutans.

Chimpanzees, for instance, stick to C3 'forest' foods even when grasses or grass-eating animals are abundant. It seems that hominids early on became dietary generalists who broadened their diets and thus their resource base. This may have been the seminal step in the development of the hominid lineage. It makes sense when one considers that global climates changed between about 4 – 1.8 millions years ago, causing African forests to be replaced by woodlands and grasslands.

Australopithecine lifestyle

The list shows that some very early hominids, more than later australopithecines, have been found near lacustrine molluscs (Lukeino and Tabarin ca. 6.5 and 5 Myr BP). *Ardipithecus ramidus*, supposedly another early hominid, must have lived in a wooded habitat, amid predominantly colobine monkeys (Aramis ca. 4.5 Myr BP). Pliocene australopithecines ca. 4–3 Myr BP apparently frequently dwelt in warm and humid, more or less closed environments (gallery forest or wooded habitat in Kanapoi, Chad, Hadar, Makapansgat, but inconclusive for Garusi–Laetoli). Pleistocene

robust

australopithecines since 2.5 Myr BP probably lived in generally dryer and more open landscapes (grassland in Kromdraai and Konso), but their remains lay in riverbanks, lagoons, marshes, lake-margins, near papyrus (Olduvai) and reed (Kromdraai, Olduvai, Chesowanja).

Although all nine Konso *A. boisei* specimens were recovered among the predominantly dry grassland fauna of KGA 10¹ (Suwa et al., 1997), this does not mean that they lived in a savanna milieu, since nearby subsites were also moist and wooded¹ (Delson, 1997). Fragmentary fossils like those of Laetoli and Konso are often the remains of carnivore meals (Morden, 1988). Leopards, which preyed upon australopithecines, prefer to feed in dry circumstances and therefore drag away their prey, sometimes several hundred meters (Brain, 1981).

The preponderance of wet environments in our list is striking, but this was not considered to be inconsistent with a savanna view, because it was believed that the fossil record sampled a disproportionate number of habitats related to water (see the above citation from Shipman and Harris, 1988). To be sure, that the hominids have been discovered in humid or wet habitats does not allow firm conclusions about how much time they spent there, but the possibility that wetter rather than drier conditions influenced hominid evolution can not be ignored. Therefore,

paleo-ecological

data must be verified and supplemented through anatomical and especially dental studies of the fossils.

It is generally agreed that all australopithecines have skeletal features of bipedality. Early graciles also show clear indications of tree climbing such as curved manual and pedal phalanges, though such features are less obvious in the robusts.

Dental studies suggest that whereas gracile australopithecines preferred softer fruits and vegetables, the robusts¹ diet included harder food items (e.g. Robinson, 1954; Du Brul, 1977; Walker, 1981; Puech, 1992; Lee-Thorp et

al., 1994). Estimates of robust australopithecine bite force suggest low-energy food that had to be processed in great quantities¹ and food objects hard and round in shape¹ (Demes & Creel, 1988). Du Brul (1977) noticed dental isms between the robust australopithecines and the bamboo-eating giant panda *Ailuropoda melanoleuca* (broad, high and heavy cheekbones, reduced prognathism and front teeth, broad back teeth, premolar molarisation), as opposed to gracile australopithecines, respectively non-panda bears.

Papyrus and reed were present in the paleo-environment of the later australopithecines (e.g. Olduvai, Chesowanja, Kromdraai), and Cyperaceae and

Gramineae are part of the diet of living African hominoids. Gorillas eat sedges and bamboo shoots and stalks, gorillas and chimpanzees eat cane,

Re: Proven facts (Re: Savanna hunters run down kudu (Re: AAT all washed up(WARNING: graphic photo)

chimps and humans eat water lilies, and rice and other cereals are staple food for humans. Supplementing their diet with parts of grasslike plants might have enabled the robusts to bridge the dry season, when fruits and soft vegetables were scarce.

Studies of dental enamel microwear provide other details. In the early australopithecines of Garusi–Laetoli and Hadar (*A. afarensis* 4–3 Myr BP), the cheekteeth enamel has a polished surface and the microwear looks like that of the capybara *Hydrochoerus hydrochaeris* and that of the mountain beaver *Aplodontia rufa* (Puech et al., 1986). These animals are semi–aquatic rodents that feed mainly on sappy marsh and

...

[read more »](#)

Waterside kudu consuming C4 resources? Maybe so.

<http://the-arc-ddeden.blogspot.com/2007/08/assorted-pics.html>

mountain beavers prefer to den near streams IIRC. Dunno if they avoid water, but I don't think so.

.

Re: Proven facts (Re: Savanna hunters run down kudu (Re: AAT all washed up(WARNING: graphic photo)