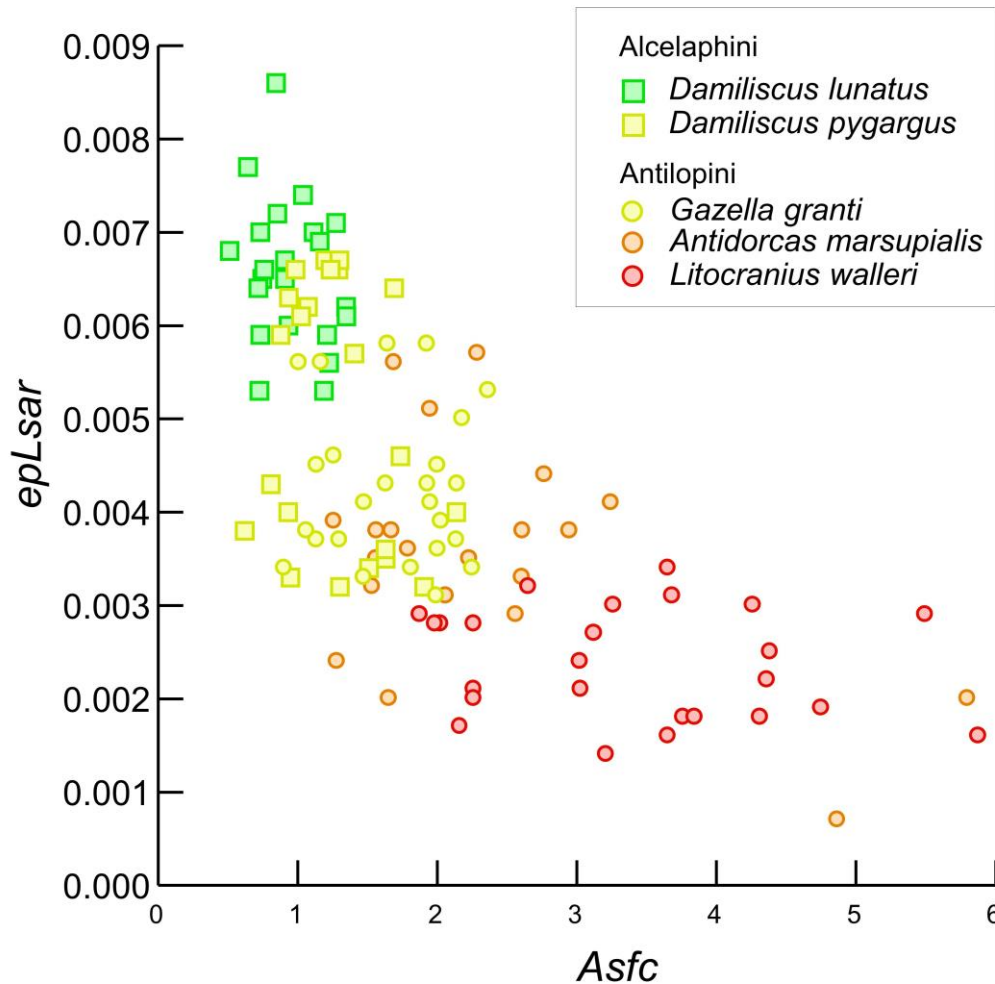


**Microwear texture comparisons of extant alcelaphin and antilopin bovids**



**Figure 1:** Microwear texture data for extant alcelaphins (*Damiliscus lunatus* and *Damiliscus pygargus*) and antilopins (*Antidorcas marsupialis*, *Gazella granti* and *Litocranius walleri*). Original data from Scott<sup>1</sup>. Note that microwear texture attribute dispersion mirrors diet variation for the two tribes. The alcelaphins (all of which are grazers) have a narrower distribution of complexity values than the antilopins, which vary from grazer to browser (see Supplementary table 1). Grass-grazing bovids tend to have higher microwear texture anisotropy (e.g. aligned scratches), whereas dicot-eating browsers average higher complexity (e.g. more pits of varying sizes).

**Table 1:** Diets of extant alcelaphins and antilopins

Scientific name	Common name	Diet
<b>Alcelaphini</b>		
<i>Alcelaphus buselaphus</i>	Hartebeest	Variable grazer
<i>Alcelaphus lichtensteinii</i>	Lichtenstein's hartebeest	Obligate grazer
<i>Connochaetes gnou</i>	Black wildebeest	Variable grazer
<i>Connochaetes taurinus</i>	Blue wildebeest	Variable grazer
<i>Damaliscus lunatus</i>	Tsessebe	Obligate grazer
<i>Damaliscus pygargus</i>	Blesbok/bontebok	Variable grazer
<i>Beatragus hunteri</i>	Hunter's hartebeest	Obligate grazer
<b>Antilopini</b>		
<i>Ammodorcas clarkei</i>	Dibatag/Clark's gazelle	Browser
<i>Antidorcas marsupialis</i>	Springbok	Browser-grazer intermediate
<i>Gazella dorcas</i>	Dorcas gazelle	Generalist
<i>Gazella granti</i>	Grant's gazelle	Variable grazer
<i>Gazella thomsoni</i>	Thomson's gazelle	Variable grazer
<i>Litocranius walleri</i>	Gerenuk	Browser

Source: Data from Gagnon and Chew<sup>2</sup>

## References

1. Scott JR. Dental microwear texture analysis of Pliocene bovids from four early hominin fossil sites in eastern Africa: Implications for paleoenvironmental dynamics and human evolution [PhD dissertation]. Fayetteville, AR: University of Arkansas; 2011.
2. Gagnon M, Chew AE. Dietary preferences in extant African Bovidae. J Mammal. 2000;81(2):490–511. [http://dx.doi.org/10.1644/1545-1542\(2000\)081<0490:DPIEAB>2.0.CO;2](http://dx.doi.org/10.1644/1545-1542(2000)081<0490:DPIEAB>2.0.CO;2)

## Appendix 1

<b>Specimen</b>	<b>Tribe</b>	<b>Locality</b>	<b>Region</b>	<b>Asfc</b>	<b>epLsar</b>
AL116-146	Alcelaphini	Hadar	Eastern Africa	2.1547	0.0031
AL126-58	Alcelaphini	Hadar	Eastern Africa	2.3096	0.0035
AL135-17	Alcelaphini	Hadar	Eastern Africa	2.1663	0.0049
AL162-2	Alcelaphini	Hadar	Eastern Africa	2.3165	0.0042
AL181-4	Alcelaphini	Hadar	Eastern Africa	2.8785	0.0048
AL196-5	Alcelaphini	Hadar	Eastern Africa	2.1648	0.0033
AL225-6	Alcelaphini	Hadar	Eastern Africa	1.9262	0.0040
AL310-2	Alcelaphini	Hadar	Eastern Africa	2.4891	0.0059
AL310-3	Alcelaphini	Hadar	Eastern Africa	1.7046	0.0059
AL325-12	Alcelaphini	Hadar	Eastern Africa	2.1688	0.0039
AL398-18	Alcelaphini	Hadar	Eastern Africa	2.5988	0.0021
AL406-25	Alcelaphini	Hadar	Eastern Africa	2.3079	0.0052
AL406-26	Alcelaphini	Hadar	Eastern Africa	1.9845	0.0086
AL451-1a	Alcelaphini	Hadar	Eastern Africa	1.6579	0.0077
AL451-1b	Alcelaphini	Hadar	Eastern Africa	1.3136	0.0063
AL485-1	Alcelaphini	Hadar	Eastern Africa	1.1847	0.0075
AL55-35	Alcelaphini	Hadar	Eastern Africa	1.6804	0.0048
AL597-1	Alcelaphini	Hadar	Eastern Africa	3.3081	0.0044
KNM-K01645	Alcelaphini	Kanapoi	Eastern Africa	1.7732	0.0037
KNM-KP1648	Alcelaphini	Kanapoi	Eastern Africa	1.2916	0.0032
KNM-KP31733	Alcelaphini	Kanapoi	Eastern Africa	1.7862	0.0055
KNM-KP4684	Alcelaphini	Kanapoi	Eastern Africa	1.4196	0.0040
KNM-KP73C	Alcelaphini	Kanapoi	Eastern Africa	1.3085	0.0035
KNM-ER17889	Alcelaphini	Koobi Fora	Eastern Africa	2.4609	0.0020
CD1231	Alcelaphini	Cooper's Cave	Southern Africa	2.0717	0.0045
CD16675	Alcelaphini	Cooper's Cave	Southern Africa	1.1032	0.0068
CD3092	Alcelaphini	Cooper's Cave	Southern Africa	1.0935	0.0065
CD314(2)	Alcelaphini	Cooper's Cave	Southern Africa	1.2681	0.0027
CD6180	Alcelaphini	Cooper's Cave	Southern Africa	1.9967	0.0030
CD6213	Alcelaphini	Cooper's Cave	Southern Africa	3.7891	0.0047
SK2482	Alcelaphini	Swartkrans	Southern Africa	1.7310	0.0064
SKX1266	Alcelaphini	Swartkrans	Southern Africa	1.2910	0.0028

<b>Specimen</b>	<b>Tribe</b>	<b>Locality</b>	<b>Region</b>	<b>Asfc</b>	<b>epLsar</b>
SKX1491	Alcelaphini	Swartkrans	Southern Africa	1.0883	0.0048
SKX19832	Alcelaphini	Swartkrans	Southern Africa	1.9286	0.0052
SKX28027	Alcelaphini	Swartkrans	Southern Africa	3.3737	0.0037
SKX2829	Alcelaphini	Swartkrans	Southern Africa	2.5378	0.0022
SKX2856	Alcelaphini	Swartkrans	Southern Africa	1.8908	0.0068
SKX29279	Alcelaphini	Swartkrans	Southern Africa	1.5913	0.0037
SKX35041	Alcelaphini	Swartkrans	Southern Africa	1.8646	0.0069
SKX35753	Alcelaphini	Swartkrans	Southern Africa	2.5225	0.0061
SKX39541	Alcelaphini	Swartkrans	Southern Africa	1.5759	0.0028
SKX39601	Alcelaphini	Swartkrans	Southern Africa	1.7369	0.0026
SKX39872	Alcelaphini	Swartkrans	Southern Africa	1.5723	0.0069
SKX4034	Alcelaphini	Swartkrans	Southern Africa	0.9496	0.0069
SKX6195	Alcelaphini	Swartkrans	Southern Africa	0.5363	0.0028
SK14122	Alcelaphini	Swartkrans	Southern Africa	2.3405	0.0050
SK2957	Alcelaphini	Swartkrans	Southern Africa	1.8066	0.0051
CD3194	Alcelaphini	Cooper's Cave	Southern Africa	1.5052	0.0030
CD5425	Alcelaphini	Cooper's Cave	Southern Africa	2.1034	0.0022
LAET75-1417	Alcelaphini	Laetoli	Eastern Africa	1.4707	0.0048
LAET75-1669	Alcelaphini	Laetoli	Eastern Africa	1.1258	0.0078
LAET75-2829	Alcelaphini	Laetoli	Eastern Africa	2.1142	0.0066
LAET75-2855	Alcelaphini	Laetoli	Eastern Africa	0.7786	0.0052
LAET75-2937	Alcelaphini	Laetoli	Eastern Africa	0.9544	0.0045
LAET75-3376	Alcelaphini	Laetoli	Eastern Africa	1.2638	0.0039
LAET75-3458	Alcelaphini	Laetoli	Eastern Africa	0.8201	0.0044
LAET75-356	Alcelaphini	Laetoli	Eastern Africa	1.5568	0.0051
LAET75-357	Alcelaphini	Laetoli	Eastern Africa	2.0223	0.0071
LAET75-832	Alcelaphini	Laetoli	Eastern Africa	1.3235	0.0065
SK3081	Alcelaphini	Swartkrans	Southern Africa	1.5346	0.0039
SK3213	Alcelaphini	Swartkrans	Southern Africa	1.4808	0.0061
LAET25-2246	Alcelaphini	Laetoli	Eastern Africa	1.6469	0.0055
LAET75-18-592	Alcelaphini	Laetoli	Eastern Africa	2.4446	0.0039
LAET75-248	Alcelaphini	Laetoli	Eastern Africa	1.1672	0.0048
LAET75-2900	Alcelaphini	Laetoli	Eastern Africa	1.5497	0.0059
LAET75-4624	Alcelaphini	Laetoli	Eastern Africa	1.9479	0.0021

<b>Specimen</b>	<b>Tribe</b>	<b>Locality</b>	<b>Region</b>	<b>Asfc</b>	<b>epLsar</b>
LAET75-56	Alcelaphini	Laetoli	Eastern Africa	1.1672	0.0048
LAET75-793	Alcelaphini	Laetoli	Eastern Africa	2.5947	0.0064
LAET76-18-354	Alcelaphini	Laetoli	Eastern Africa	2.8633	0.0039
LAET76-7E-23	Alcelaphini	Laetoli	Eastern Africa	2.7914	0.0055
LAET76-7E-25	Alcelaphini	Laetoli	Eastern Africa	2.4390	0.0048
CD10891	Antilopini	Cooper's Cave	Southern Africa	1.1910	0.0059
CD11740	Antilopini	Cooper's Cave	Southern Africa	1.8835	0.0050
CD1227	Antilopini	Cooper's Cave	Southern Africa	1.6304	0.0056
CD3160	Antilopini	Cooper's Cave	Southern Africa	1.9390	0.0021
CD322	Antilopini	Cooper's Cave	Southern Africa	1.6165	0.0036
CD5445	Antilopini	Cooper's Cave	Southern Africa	2.1801	0.0027
CD5475	Antilopini	Cooper's Cave	Southern Africa	2.7630	0.0022
CD7449	Antilopini	Cooper's Cave	Southern Africa	1.5824	0.0044
CD7453	Antilopini	Cooper's Cave	Southern Africa	1.3141	0.0035
CD7492	Antilopini	Cooper's Cave	Southern Africa	3.1086	0.0027
LAET3373-00	Antilopini	Laetoli	Eastern Africa	2.6369	0.0018
LAET75-18-596	Antilopini	Laetoli	Eastern Africa	4.8409	0.0013
SK2256	Antilopini	Swartkrans	Southern Africa	1.3889	0.0057
SK3009	Antilopini	Swartkrans	Southern Africa	1.0061	0.0083
SK3054	Antilopini	Swartkrans	Southern Africa	1.1891	0.0019
SK3092	Antilopini	Swartkrans	Southern Africa	0.8924	0.0057
SK3095	Antilopini	Swartkrans	Southern Africa	3.6630	0.0028
SKX14147	Antilopini	Swartkrans	Southern Africa	1.9589	0.0069
SKX35038	Antilopini	Swartkrans	Southern Africa	1.2228	0.0071
SKX35320	Antilopini	Swartkrans	Southern Africa	1.1161	0.0025
SKX39908	Antilopini	Swartkrans	Southern Africa	1.9141	0.0042
LAET75-910	Antilopini	Laetoli	Eastern Africa	5.2489	0.0008
LAET78-5198	Antilopini	Laetoli	Eastern Africa	1.7176	0.0049
AL251-5	Antilopini	Hadar	Eastern Africa	5.1466	0.0038
AL255-6	Antilopini	Hadar	Eastern Africa	4.4877	0.0029
AL444-27	Antilopini	Hadar	Eastern Africa	2.9847	0.0027
AL452-15	Antilopini	Hadar	Eastern Africa	3.1650	0.0030
AL452-2	Antilopini	Hadar	Eastern Africa	4.3165	0.0035
AL496-2	Antilopini	Hadar	Eastern Africa	3.8647	0.0042

<b>Specimen</b>	<b>Tribe</b>	<b>Locality</b>	<b>Region</b>	<b>Asfc</b>	<b>epLsar</b>
AL773-3	Antilopini	Hadar	Eastern Africa	4.1598	0.0033
AL807-1	Antilopini	Hadar	Eastern Africa	3.5876	0.0022
AL132-7	Antilopini	Hadar	Eastern Africa	2.5988	0.0059
AL161-4	Antilopini	Hadar	Eastern Africa	3.0847	0.0062
AL613-1	Antilopini	Hadar	Eastern Africa	2.4988	0.0043
AL666-24	Antilopini	Hadar	Eastern Africa	1.9785	0.0040
AL713-2	Antilopini	Hadar	Eastern Africa	2.1978	0.0048
AL713-3	Antilopini	Hadar	Eastern Africa	2.3649	0.0056
EP497-00	Antilopini	Laetoli	Eastern Africa	3.3926	0.0037
LAET75-2741	Antilopini	Laetoli	Eastern Africa	2.4512	0.0017
LAET75-3520	Antilopini	Laetoli	Eastern Africa	1.4567	0.0022
SK10440	Antilopini	Swartkrans	Southern Africa	1.8786	0.0043
KMN-KP103	Antilopini	Kanapoi	Eastern Africa	5.3048	0.0045
KMN-KP30206	Antilopini	Kanapoi	Eastern Africa	4.6156	0.0044
KMN-KP30207	Antilopini	Kanapoi	Eastern Africa	2.8354	0.0033
KMN-KP30416	Antilopini	Kanapoi	Eastern Africa	2.6204	0.0028
KMN-KP30427	Antilopini	Kanapoi	Eastern Africa	4.0728	0.0035
KMN-KP30537	Antilopini	Kanapoi	Eastern Africa	3.9542	0.0037
KMN-KP36832	Antilopini	Kanapoi	Eastern Africa	2.3060	0.0030
KMN-KP36835	Antilopini	Kanapoi	Eastern Africa	1.8347	0.0024
KMN-KP36840	Antilopini	Kanapoi	Eastern Africa	4.7322	0.0035
AL128-23	Hominin	Hadar	Eastern Africa	0.6500	0.0012
AL145-35	Hominin	Hadar	Eastern Africa	0.8700	0.0034
AL188-1	Hominin	Hadar	Eastern Africa	0.5300	0.0039
AL200-1b	Hominin	Hadar	Eastern Africa	0.7000	0.0057
AL225-8	Hominin	Hadar	Eastern Africa	1.0600	0.0059
AL288-1i	Hominin	Hadar	Eastern Africa	0.6900	0.0018
AL333-74	Hominin	Hadar	Eastern Africa	0.5400	0.0060
AL333w-12	Hominin	Hadar	Eastern Africa	1.1700	0.0037
AL333w-1a	Hominin	Hadar	Eastern Africa	0.7100	0.0055
AL333w-57	Hominin	Hadar	Eastern Africa	0.7000	0.0038
AL333w-59	Hominin	Hadar	Eastern Africa	0.1900	0.0029
AL333w-60	Hominin	Hadar	Eastern Africa	0.7800	0.0052
AL366-1	Hominin	Hadar	Eastern Africa	0.8500	0.0009

<b>Specimen</b>	<b>Tribe</b>	<b>Locality</b>	<b>Region</b>	<b>Asfc</b>	<b>epLsar</b>
AL400-1a	Hominin	Hadar	Eastern Africa	0.7300	0.0022
AL486-1	Hominin	Hadar	Eastern Africa	0.9700	0.0014
AL487-1c	Hominin	Hadar	Eastern Africa	0.4700	0.0024
KNM-KP29287	Hominin	Kanapoi	Eastern Africa	0.8079	0.0030
KNM-KP34725	Hominin	Kanapoi	Eastern Africa	1.3100	0.0024
KNM-ER35236	Hominin	Koobi Fora	Eastern Africa	0.9747	0.0031
LH15	Hominin	Laetoli	Eastern Africa	1.0700	0.0042
LH4	Hominin	Laetoli	Eastern Africa	0.5500	0.0016
LH8/22	Hominin	Laetoli	Eastern Africa	0.8200	0.0032
STS12	Hominin	Sterkfontein	Southern Africa	1.9200	0.0020
STS17	Hominin	Sterkfontein	Southern Africa	1.9600	0.0044
STS22	Hominin	Sterkfontein	Southern Africa	1.3800	0.0036
STS28	Hominin	Sterkfontein	Southern Africa	1.1600	0.0028
STS30	Hominin	Sterkfontein	Southern Africa	2.1800	0.0033
STS31	Hominin	Sterkfontein	Southern Africa	1.6100	0.0037
STS52	Hominin	Sterkfontein	Southern Africa	1.3700	0.0065
STS53	Hominin	Sterkfontein	Southern Africa	1.4500	0.0069
STS61	Hominin	Sterkfontein	Southern Africa	1.0100	0.0051
TM1511	Hominin	Sterkfontein	Southern Africa	1.1800	0.0028
KNM-BK8518	Hominin	Baringo	Eastern Africa	0.5100	0.0035
KNM-ER1808	Hominin	Koobi Fora	Eastern Africa	3.1600	0.0052
KNM-ER807	Hominin	Koobi Fora	Eastern Africa	1.6500	0.0023
KNM-ER820	Hominin	Koobi Fora	Eastern Africa	3.7700	0.0055
KNM-ER992	Hominin	Koobi Fora	Eastern Africa	0.8500	0.0030
KNM-WT15000	Hominin	Nachukui	Eastern Africa	1.2600	0.0024
OH15	Hominin	Olduvai	Eastern Africa	0.6500	0.0054
OH16	Hominin	Olduvai	Eastern Africa	0.7500	0.0011
OH4	Hominin	Olduvai	Eastern Africa	1.6800	0.0042
OH41	Hominin	Olduvai	Eastern Africa	1.0900	0.0008
OH60	Hominin	Olduvai	Eastern Africa	2.0600	0.0021
OH65	Hominin	Olduvai	Eastern Africa	2.1600	0.0013
OH67	Hominin	Olduvai	Eastern Africa	0.9400	0.0018
OH69	Hominin	Olduvai	Eastern Africa	0.6200	0.0038
OH70	Hominin	Olduvai	Eastern Africa	0.3500	0.0052

<b>Specimen</b>	<b>Tribe</b>	<b>Locality</b>	<b>Region</b>	<b>Asfc</b>	<b>epLsar</b>
OH7X	Hominin	Olduvai	Eastern Africa	1.0400	0.0047
SE1508	Hominin	Sterkfontein	Southern Africa	0.7200	0.0060
SE1579	Hominin	Sterkfontein	Southern Africa	1.0400	0.0023
STW15	Hominin	Sterkfontein	Southern Africa	0.6500	0.0072
SK15	Hominin	Swartkrans	Southern Africa	0.6200	0.0057
SK27	Hominin	Swartkrans	Southern Africa	0.8400	0.0016
SK45	Hominin	Swartkrans	Southern Africa	1.4800	0.0016
SK847	Hominin	Swartkrans	Southern Africa	1.2800	0.0029
KNM-CH1B	Hominin	Chesowanja	Eastern Africa	0.5800	0.0020
KNM-ER3230	Hominin	Koobi Fora	Eastern Africa	0.4500	0.0066
KNM-ER3952	Hominin	Koobi Fora	Eastern Africa	0.4100	0.0055
KNM-ER729	Hominin	Koobi Fora	Eastern Africa	0.9500	0.0033
TM1517a	Hominin	Kromdraai	Southern Africa	2.9000	0.0022
OH5	Hominin	Olduvai	Eastern Africa	1.0500	0.0014
OH66	Hominin	Olduvai	Eastern Africa	0.3100	0.0013
OH74	Hominin	Olduvai	Eastern Africa	0.9300	0.0031
OmoL7A-125	Hominin	Omo	Eastern Africa	0.5800	0.0024
SK13	Hominin	Swartkrans	Southern Africa	2.4900	0.0027
SK16-1591	Hominin	Swartkrans	Southern Africa	4.1100	0.0022
SK42	Hominin	Swartkrans	Southern Africa	1.8700	0.0019
SK48	Hominin	Swartkrans	Southern Africa	5.2200	0.0024
SK49	Hominin	Swartkrans	Southern Africa	5.0600	0.0023
SK834	Hominin	Swartkrans	Southern Africa	1.2700	0.0020
SK837	Hominin	Swartkrans	Southern Africa	4.2900	0.0009
SK877	Hominin	Swartkrans	Southern Africa	4.6900	0.0014
KNM-WT17400	Hominin	West Turkana	Eastern Africa	0.3600	0.0019