10 kHz above *Galago senegalensis* (which previously had the highest known high-frequency limit among primates). In fact, such extreme sensitivity to ultrasounds is found in only a few animal lineages such as bats, rodents, cetaceans and amphibians. Additional studies including other tarsiers species and exploring the ultrasonic acoustic environment and signals and cues produced by tarsiers and their prey may shed light on selective pressures that resulted in this unique physiology. Such findings have broader relevance to understanding the evolution of ultrasound sensitivity among primates and across the animal kingdom.
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Mandibular diminution between the Medieval and post-Medieval periods in London: evidence for reduced masticatory function.

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Biomechanical forces, such as those created during mastication, are considered primary stimulating agents in craniofacial growth and development. Due to the direct connection between masticatory muscle strength and craniofacial form, fluctuations in biomechanical force and muscle strength can alter the underlying bony morphology. Proposed by Carlson and Van Gerven in 1977, the Masticatory Functional Hypothesis suggests that decreases in functional stimulation of the masticatory apparatus reduce the amount of force placed on the jaws, causing diminution of mandibular and facial dimensions. The Industrial Revolution of the 18th and 19th century profoundly changed human lifestyle; advancements in food technology dramatically altered what humans ate, with food becoming more processed and softer, requiring little chewing. As suggested by the Masticatory Functional Hypothesis, decreased stimulation on the jaws leads to a reduction in size of the human mandible, but can this hypothesis be applied to the changes in diet observed in the transition to the post-industrialised era? To test this, an assemblage (n=280) of skulls from Medieval and post-Medieval London were selected for full metric analysis of the mandible, utilizing standard methods. Analysing male and female specimens separately, the results show significant reductions in mandibular dimensions for the post-Medieval group, compared to the Medieval one. These results may indicate that changes in diet observed during this period affected mandibular growth and its eventual form. Further studies focusing on the transition to the modern era can clarify the impact of contemporary diet on the changing form of the human mandible.

Relative contributions of internal reaction forces to stresses in the great ape mandibular symphysis.

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The relative contributions of the different internal reaction forces to stresses at the symphysis in primate mandibles is unresolved. These reaction forces arise due to occlusal forces, muscle forces and mandibular geometry. Knowledge of these contributions, in concert with ecological observations, may infer dietary habits of primate ancestors.
We determined stresses in mandibular symphyseal sections using existing finite element software (VA-BATTS) for sections with inhomogeneous elastic properties. We used sagittal sections from computed tomographic scans of *Gorilla gorilla* (3 female, 3 male) and *Pongo pygmaeus* (6 female, 3 male) mandibles. We determined internal reaction forces due to a left premolar occlusal force using free body diagrams, equilibrium, mandibular geometry and assumptions regarding masticatory muscle and joint reaction force lines of action. The internal reaction forces included an axial force and a torque perpendicular to the sagittal plane and transverse shearing forces and bending moments in the superoinferior and labiolingual directions. We applied these internal forces to the sections individually and all together and determined principal and maximum shear stresses throughout the sections.
Obviously, the greatest stresses occurred when all the loads were applied. For this load case, stresses in the males were about half those in the females for the same occlusal force regardless of species; stresses in the *Pongo* were about 25% larger than those in the *Gorilla*. Stresses for the cases of individually applied torques and axial and shear forces were an order to orders of magnitude less than when all loads or just bending moments were applied.
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Oh Grandmother, what big teeth you have!

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Mouse lemur females have long been recognized as dominant over males – winning the great majority of contests over resources. However, that dominance has never before been linked to strong reverse canine dimorphism. Such canine dimorphism is manifested in *Microcebus griseorufus* in southwest Madagascar, and it occurs independently in populations inhabiting three forests at Beza Mahafaly (a gallery forest called Parcel 1, spiny forest called Parcel 2, and dry forest called Ihazoara). Females and males at these forests also differ significantly in their feeding and nesting behavior.
Between October 2006 and September 2007, the morphometrics and activities of male and female *M. griseorufus* at the above three forests were recorded using both capture/mark/recapture techniques and focal-individual follows of radiocollared individuals. Canine heights of captured individuals were systematically measured. *M. griseorufus* targets particular tree species for exudates and others for nesting. Females have greater access to gum trees throughout the year and to tree holes for nesting during the dry season and just before parturition. The soluble sugars in gums provide energy for fat storage which, with female dominance, explains female-biased seasonal torpor. Across Madagascar, only those mouse lemurs with access to sufficient soluble sugars (either from fruit or gums) will enter seasonal torpor; species and populations that rely principally on insects will not. Gum-producing trees are often uncommon in the dry habitats of the southwest where fruit is scarce and seasonally limited, so the monopolization of particular gum trees may be critically important to the reproductive success of females.
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Hydrolyzable tannins in red colobus and mountain gorilla diets.

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Hydrolyzable tannins (HT) are a class of polyphenols found in plant tissues. The effects of HT are not well-understood, but they may form insoluble complexes with proteins and minerals, thereby diminishing diet quality. While many studies focus on the role of con-