

Pharmacological semen collection and sperm morphometric evaluation in Silky anteater (*Cyclopes didactylus*) Linneus, 1758

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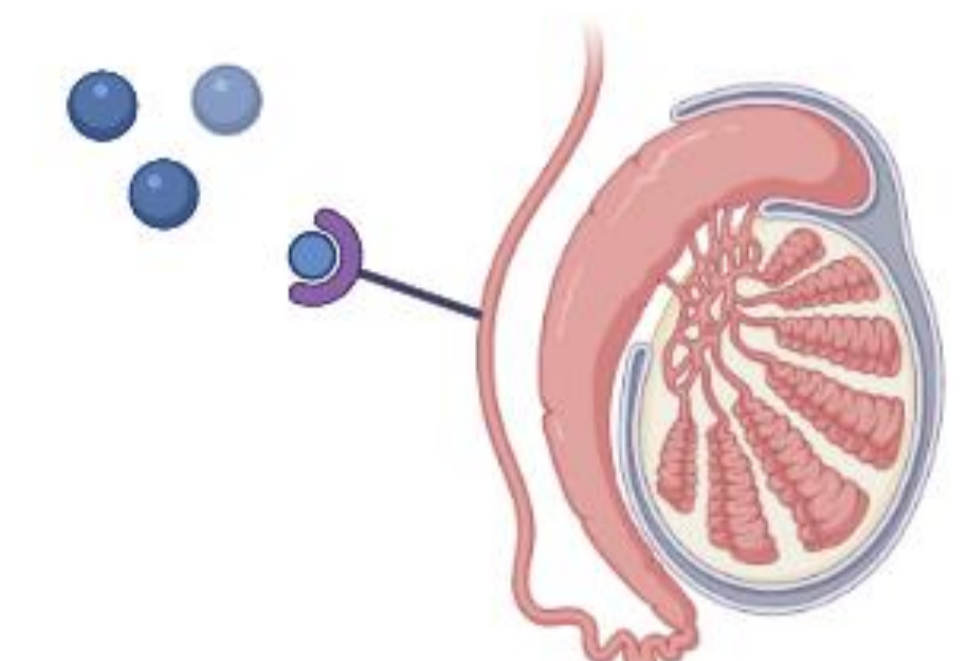
Why pharmacological (α_2 -agonists) semen collection by urethral catheterization should be elected for endangered species?

Less invasive alternative with capability to dismiss specialized equipment, such as electroejaculator, resulting in highly concentrated semen.

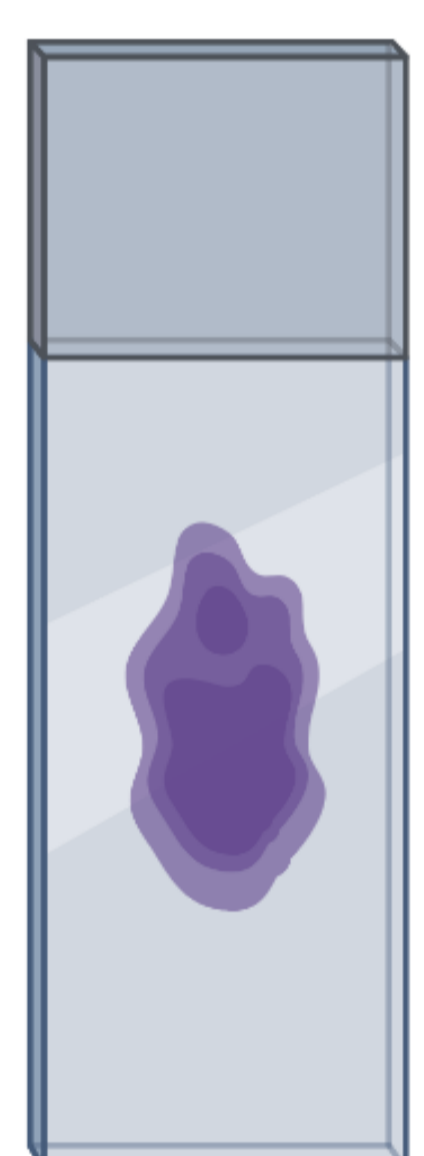
The α_2 -agonists are conventional anaesthetic to capture and restrain in wild. Also, it conducts the smooth muscle contraction of the *vas deferens*, promoting the emission of semen in the urethra, which can be collected by a urethral catheter.



Ketamine 5mg/Kg
 Medetomidine 0.02mg/Kg
 IM



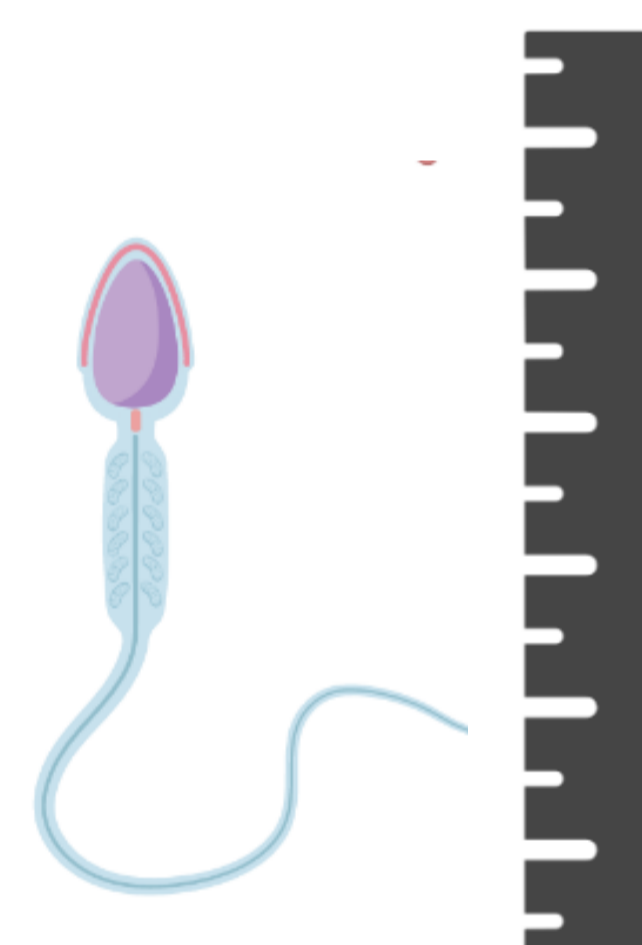
Vas deferens contraction



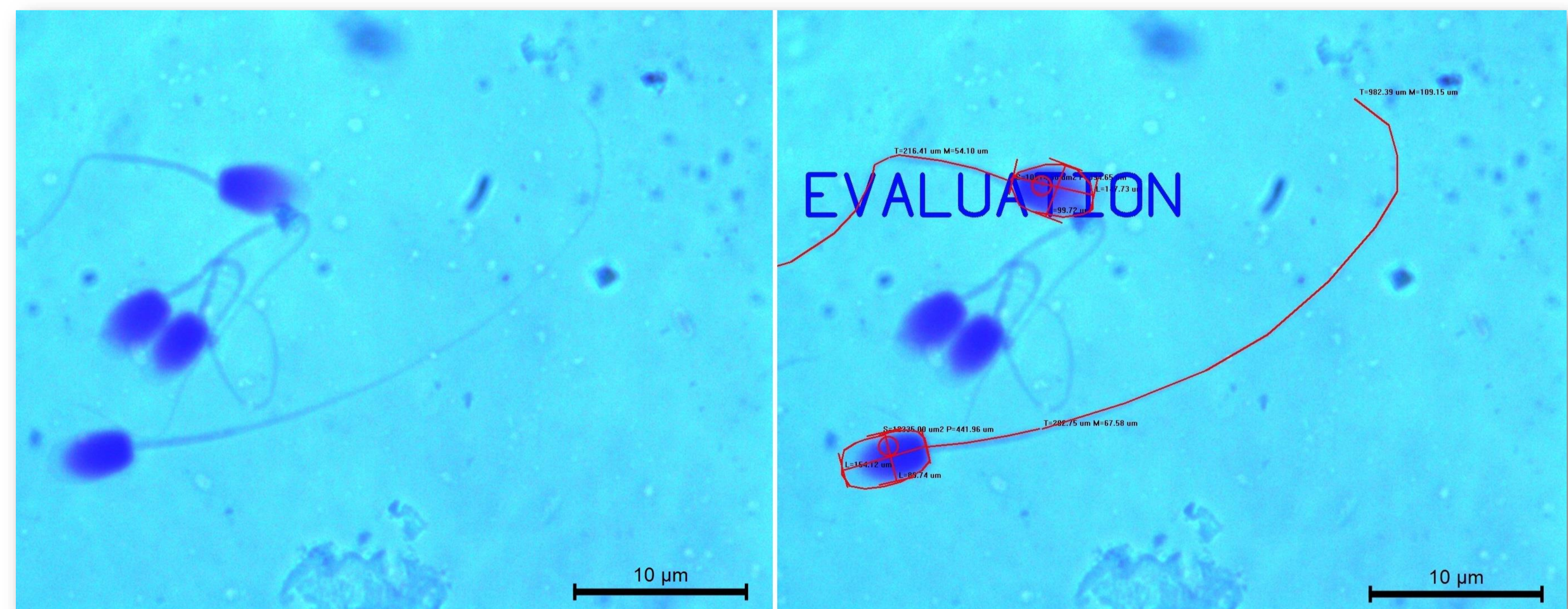
Panoptic stain



Magnification 1000X



Micrometrics SE Premium v.2.8



	mean \pm SEM	CV(%)
Head length (μm)	4.98 \pm 0,04	8.98
Head width (μm)	2.91 \pm 0.02	8.37
Midpiece length (μm)	6.2 \pm 0.04	7.36
Tail length (μm)	22.82 \pm 0.28	15.24
Total sperm length (μm)	34.04 \pm 0.3	10.75
Head area (μm^2)	11.49 \pm 0.12	12.85
Head perimeter (μm)	13.53 \pm 0.07	6.47
Head ellipticity	1.71 \pm 0.01	9.03
Head elongation	0.26 \pm 0.00	16.81
Head rugosity	0.79 \pm 0.00	0
Head regularity	0.99 \pm 0.00	7.95

Efforts to preserve this and other species are very important for conservation, as many habitats are suffering from **increasing deforestation**. Furthermore, the preservation of biodiversity is also closely linked to human health through of unique health concept.

For silky anteaters, the smallest known anteater and an endangered species, knowledge about the characteristics of the semen is a big step towards cryopreservation of gametes and formation of germplasm banks for use in **assisted reproduction techniques in the future**.

Aknowledgments

Prism Shapiro-Wilk test for normality. The results are presented as mean \pm SEM and Coefficient Variation (CV, %) N = 150 sperm cells