

# Seasonal variation in some reproductive parameters of male vicuña in the high andes of northern chile

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Experiments were undertaken to obtain information on the effects of season on endocrine function and testicular morphology in male vicuña. Serial blood samples were taken every 15 min over 4-8 h in February and August: testes size was measured and testicular biopsies obtained. Plasma testosterone was higher ( $p < 0.001$ ) in February ( $6.60 \pm 0.35$  nmol l<sup>-1</sup>) than in August ( $4.45 \pm 0.37$  nmol l<sup>-1</sup>). Longitudinal and transverse testes diameters were greater at  $3.3 \pm 0.22$  cm ( $p < 0.001$ ) and  $1.89 \pm 0.24$  cm ( $p < 0.003$ ) in February than they were, at  $2.64 \pm 0.18$  cm and  $1.50 \pm 0.25$  cm, in August. Seminiferous tubules had greater diameters in February ( $163.49 \pm 29.64$   $\mu$ m) than in August ( $137.90 \pm 25.15$   $\mu$ m); Leydig cell nuclei diameters were also greater ( $5.88 \pm 0.97$   $\mu$ m vs.  $4.19 \pm 1.03$   $\mu$ m), both sets of data differing significantly ( $p < 0.001$ ). February is an active spermatogenic phase and August a regression phase. © 1994 Academic Press Limited.