Pterapogon kauderni - pez cardenal
Sistema de roles invertidos, macho incuba huevos en la boca

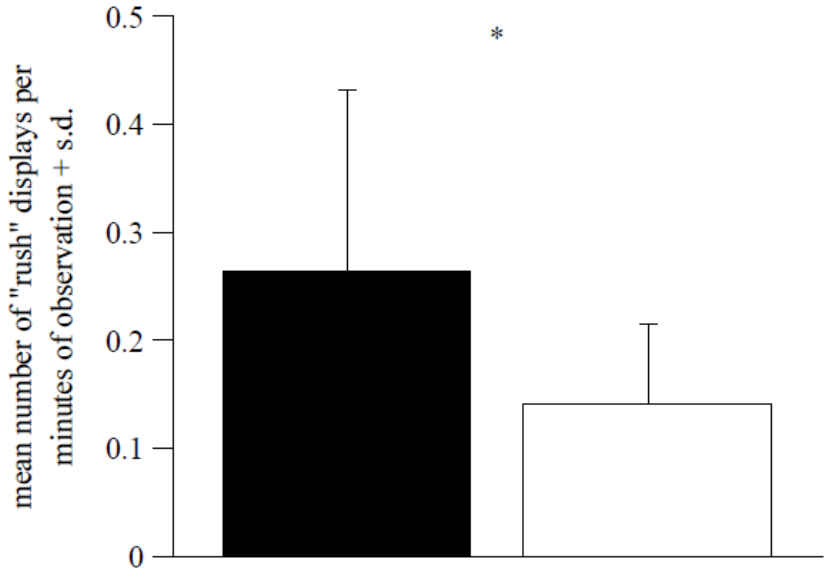

Figure 1. Mean (+s.d.) number of rush displays performed per minute of observation for females paired with large males (filled bars) ($n = 11$) and females paired with small males (open bars) ($n = 8$). $^{*}p < 0.05$.

Rush displays: unidad comportamental del cortejo.

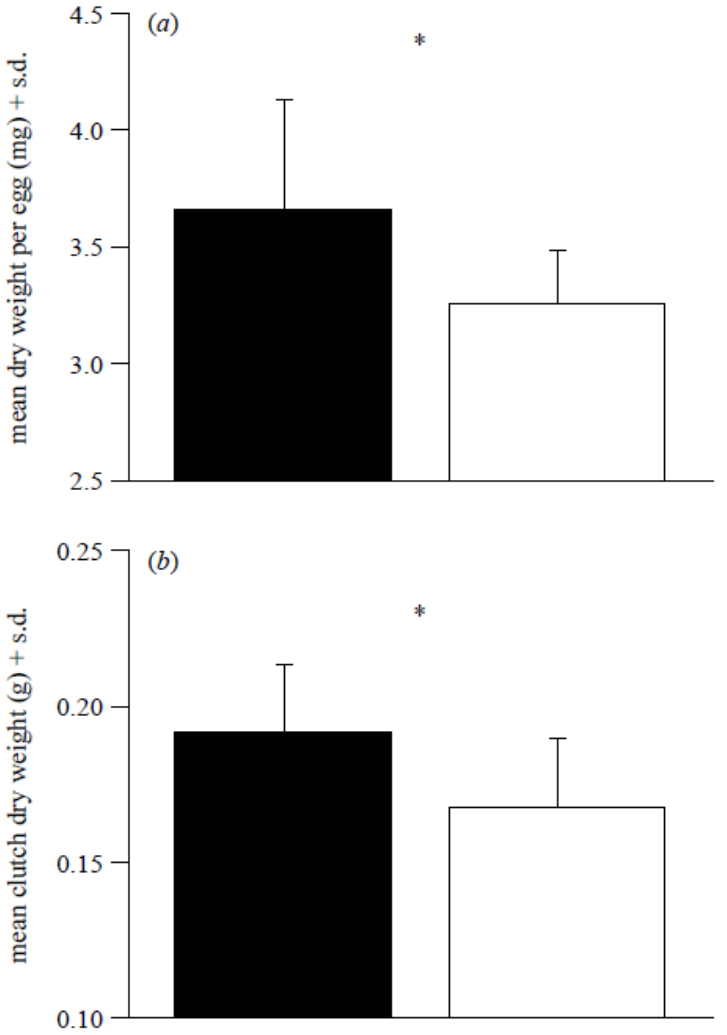

Figure 2. (*a*) Mean (+s.d.) dry weight per egg for females paired with large males (filled bars) ($n = 11$) and females paired with small males (open bars) ($n = 8$). $^{*}p < 0.05$. (*b*) Mean (+s.d.) dry weight of a total egg clutch for females paired with large males (filled bars) ($n = 8$) and females paired with small males (open bars)

Kolm, 2001.

Sygnathus typhle

Roles invertidos, hembras muestran un ornamento momentáneo cuando compiten con otras hembras y cuando cortejan a los machos

Día uno: las hembras interactúan entre sí (compiten) y el macho las observa.
Día 2: las hembras no se ven entre sí (solo cortejan) y el macho las observa.
El macho puede oler a las hembras y hacer la danza del cortejo a través del acrílico que los separa en ambos días.

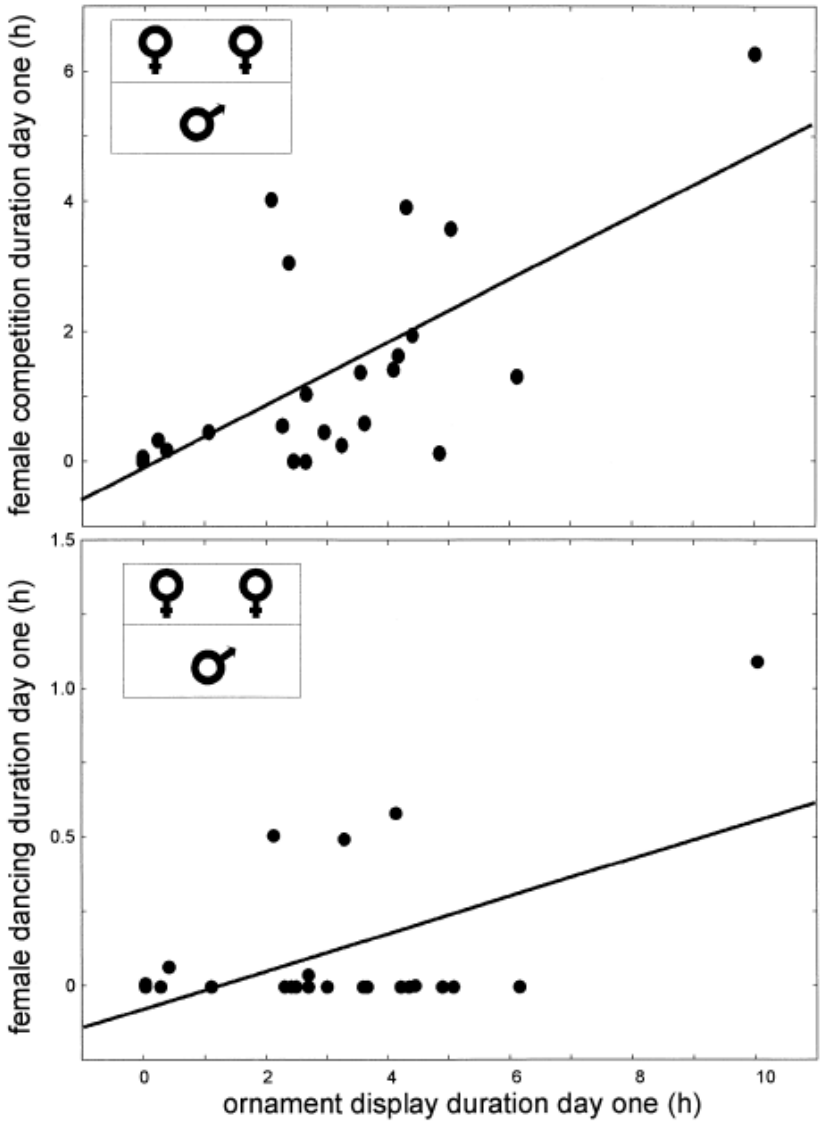

Figure 3
The duration of female ornament display on day one (with female-female competition) correlated with (a) the duration of female-female competition that day (Spearman $R_s = .60$, $n = 24$, $p < .002$, linear regression line showed in graph), but not with (b) the dancing duration with the male (Spearman $R_s = -.05$, $n = 24$, $p = .8$). The regression in (a) is significant even if the extreme data point in the upper right corner is removed (Spearman $R_s = .55$, $n = 23$, $p < .01$).

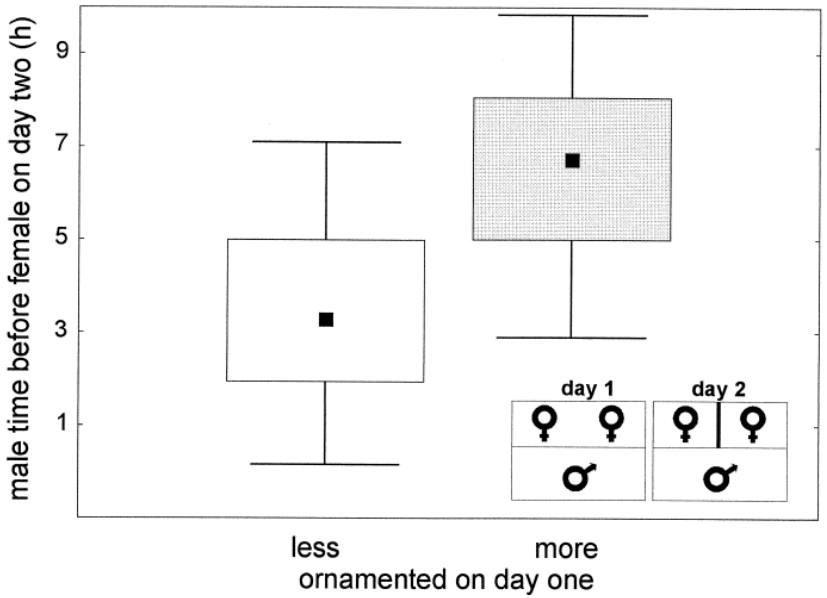

Figure 2
The female displaying the ornament for longer on day one (with female–female competition) was chosen by the male on day two (with females separated), as compared to the female displaying for shorter (Wilcoxon matched-pairs test, $T = 32$, $p < .01$, $n = 24$). Mate choice is estimated in terms of the total time spent by a male in front of either female on day two. Black squares are medians, boxes quartiles and bars represent minimum and maximum values. Inserts show mate choice aquaria from above on day one and two.

Female ornament: ornamento momentáneo que portan las hembras durante las interacciones con otras hembras o con machos

Berglund & Rosenqvist, 2001.

Gobiusculus flavescens – gobi de dos puntos
Sistema de roles convencionales

OSR: proporción operacional de sexos.
Proporción de sexos entre los individuos que están disponibles para reproducirse en un momento dado.
Puede cambiar a lo largo de una estación reproductiva.
Male bias: más machos que hembras
Female bias: más hembras que machos

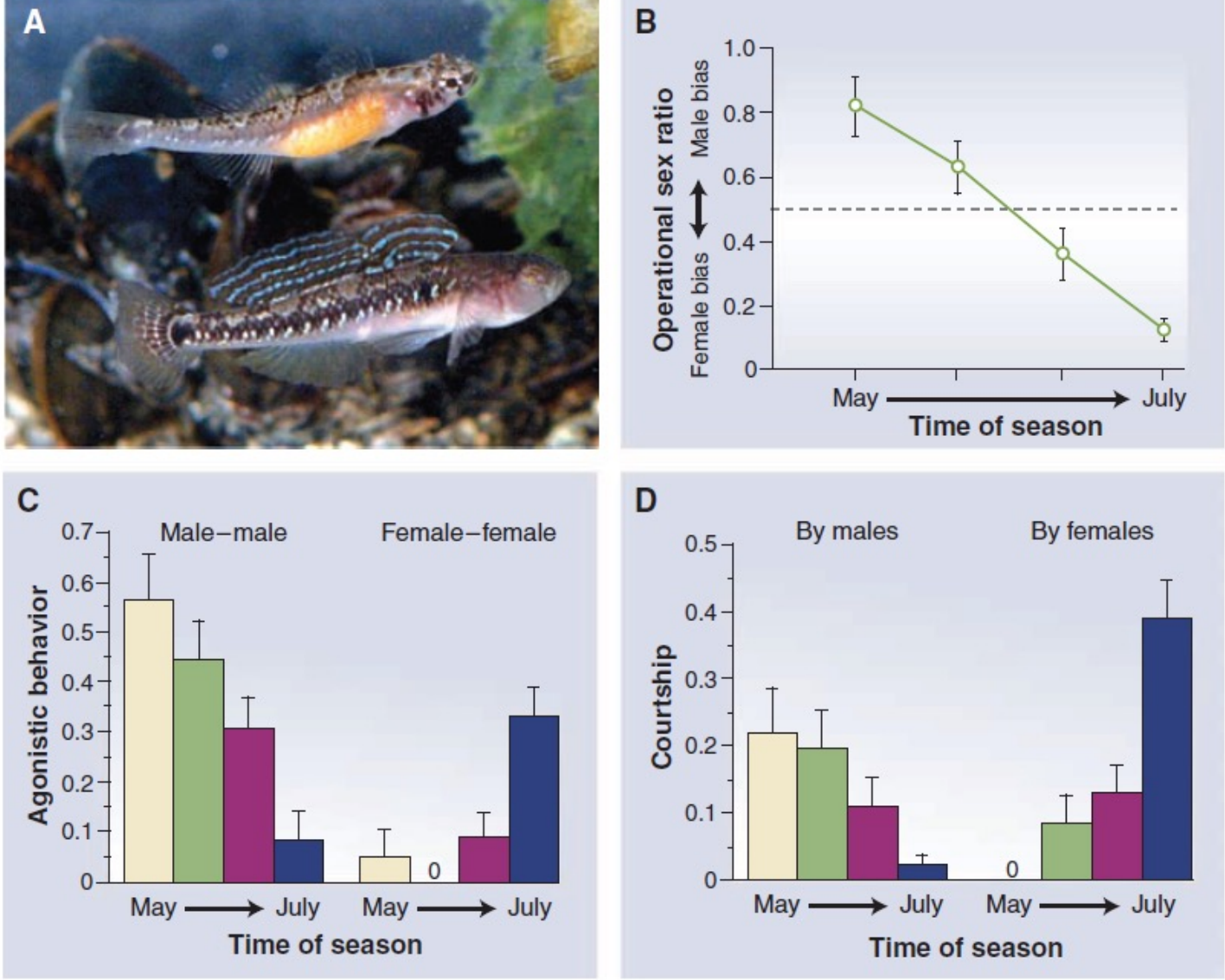

Fig. 3. Seasonal changes in the relative frequency of competition and display in two-spotted gobies (*Gobiusculus flavescens*) [reproduced from (*66*) by permission]. (**A**) Female and male two-spotted gobies. (**B**) Seasonal changes in the operational sex ratio. (**C**) Change in male and female propensity to behave agonistically when encountering same-sex individuals. (**D**) Change in male and female propensity to perform courtship.

Forsgren et al., 2004. Revisado en Clutton-Brock, 2008.

Crocuta crocuta – hiena manchada
Sistema de jerarquías, los rangos sociales determinan el acceso a la comida y otros recursos.

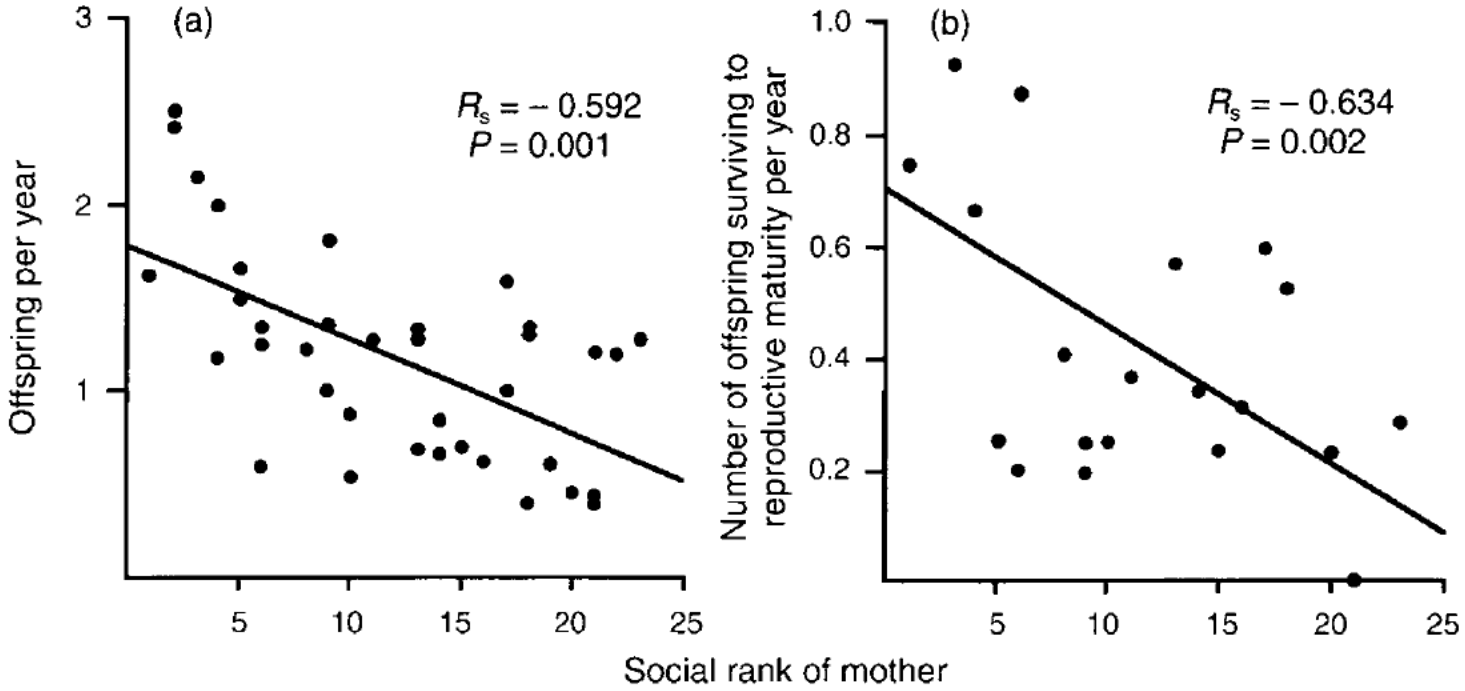

Fig. 6. (a) Total number of offspring produced per year the mother was observed as an adult, expressed as a function of the social rank of the mother for 37 female *Crocuta* who produced litters during the study period. (b) Number of offspring surviving to reproductive maturity produced per year the mother was observed as an adult, for 21 females whose offspring might have survived to reproductive maturity during the study period.

Holekamp et al., 1996.

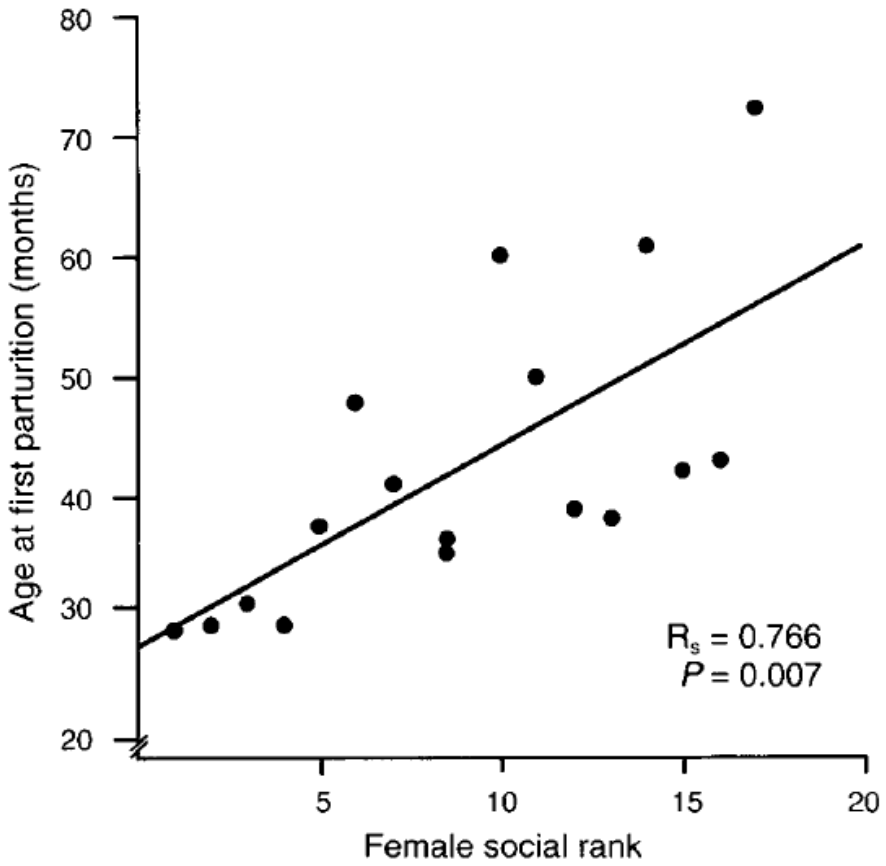

Fig. 1. Ages at first parturition as a function of social rank for 17 female *Crocuta* who started breeding during the study period. Females holding rank positions 1 to 4 were all members of the alpha matriline.

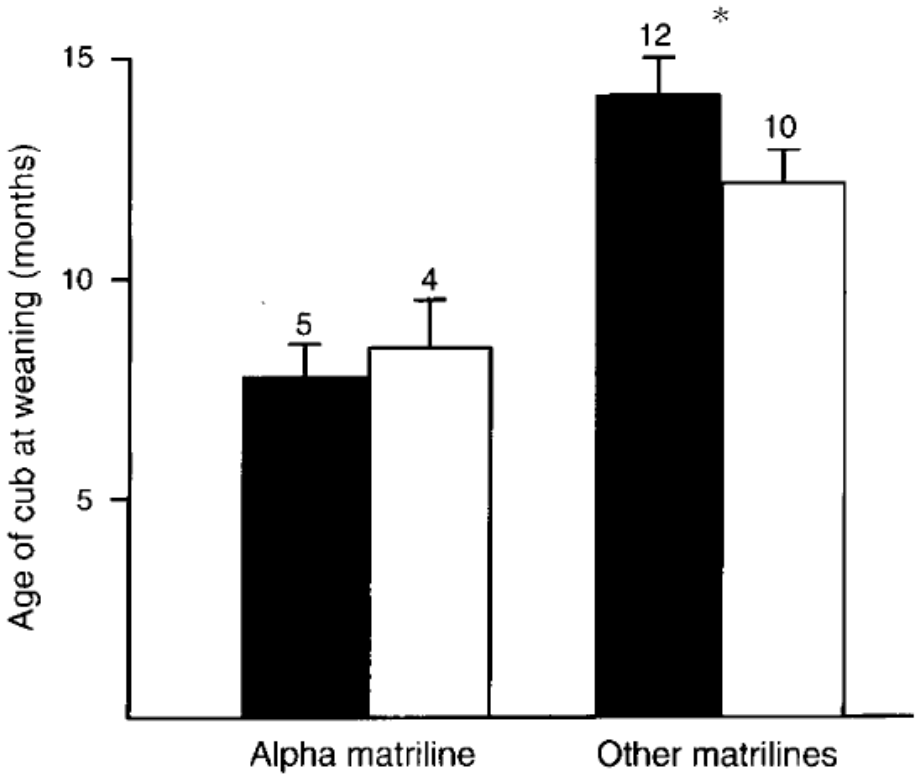

Fig. 7. Effects of abundance of prey (■: little game; □: much game) on duration of lactation following births of singleton litters by adult female *Crocuta* in the alpha ($n = 4$ females) and lower-ranking ($n = 9$ females) matrilines. Sample sizes represent numbers of singleton litters born. $^*P < 0.05$.

Holekamp et al., 1996.