

研究论文

# 三种犬科动物春季洞穴特征

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**摘要** 2004年4月~2005年6月在内蒙古达赉湖国家级自然保护区对20个狼穴、27个赤狐洞穴、33个沙狐洞穴进行测量调查, 结果如下: 3种犬科动物洞穴的洞口朝向无显著差异, 赤狐和沙狐洞穴在洞口倾角、洞口直径、第一洞道长度3个特征上无显著差异, 洞口直径可作为判别狼穴与其它两者洞穴的依据。影响狼春季洞穴选择的前3位主要因子是隐蔽、人为干扰和水源。影响赤狐春季洞穴选择的前3位主要因子是地形、水源、和人为干扰。影响沙狐春季洞穴选择的前3位主要因子是微气候、人为干扰和食物。通过对3种犬科动物春季洞穴生境选择的比较发现: 3种动物洞穴都有远离人为干扰, 提高隐蔽性的趋势; 不同的是赤狐和狼的洞址都靠近水源, 沙狐洞址则远离水源; 3种动物在地形及坡位选择上也存在差异, 赤狐和狼的洞穴多位于平地, 而沙狐洞穴多位于坡地的坡顶, 且洞穴周围啮齿类数量显著大于赤狐洞穴和狼穴。柳灌丛、干旱苇塘、高草坡地分别是赤狐、狼、沙狐偏爱的生境类型。3种犬科动物中洞穴生态位宽度最大的是狼(0.5051), 其次为赤狐(0.4292), 最小为沙狐(0.2591)。其中狼与赤狐洞穴空间生态位重叠指数较高, 达到了0.4692, 沙狐与赤狐洞穴空间生态位重叠指数最低, 只有0.2356。

关键词

[狼; 赤狐; 沙狐; 洞穴; 生境选择; 空间生态位](#)

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## Characteristics of dens in spring of three species of canids

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### Abstract

This study investigated the selection of dens of three species of canids from March to June of 2005 in the prairie of eastern Inner Mongolia. 80 dens, included 20 wolf dens, 27 red fox dens and 33 corsac fox dens, were measured. Through principal component analysis, Independent-samples T Test and Chi-square statistic analysis, we found: The entrance direction has no significant difference among them. The angle of dens entrance, diameter of dens entrance and length of the first channel has no significant difference between red fox and corsac fox also. But the angle of wolf dens entrance was less than others, and wolf dens has the biggest entrance. Wolves often locate their dens in dry reed pond of near the water source and far from human disturbance. Den sites are characterized by better Sheltering class and flattest slope. Result of principal component analysis showed that the first 3 principal components explained 83.080% of the total variance among all habitat variables. According to absolute value of coefficient, the 3 components were classified separately as sheltering class factor, disturbance factor and water factor. Sheltering class factor is the chief factor in den site selection. Red fox preferred to den in the flat willow bosk with better sheltering class, which far from human disturbance and near the water source. Result of principal component analysis showed that the first 3 principal components explained 80.659% of the total vari

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ance among all habitat variables. According to absolute value of coefficient, the 3 components were classified separately as landform factor, water factor and disturbance factor. Landform class factor is the chief factor in den site selection. Most of corsac fox dens locate in the top slope with high grass and far from human disturbance. The distance between den and water source is about 200m. Density of rodent is high around corsac fox dens. Result of principal component analysis showed that the first 3 principal components explained 81.343% of the total variance among all habitat variables. According to absolute value of coefficient, the 3 components were classified separately as microclimate factor, disturbance factor and food factor. Microclimate factor class factor is the chief factor in den site selection. Better sheltering class and keeping away from human disturbance is common requirement of three species of canids. The main difference between corsac fox dens and others are the distance to water source and Slope location. Dry reed pond is the first option to wolf, red fox prefer to den in the flat willow bosk, and corsac fox like to breeding pups in Sloping field with high grass. The spatial nich of dens could be ranked in decreasing order of width as follows: wolf, red fox, corsac fox. The overlap of spatial niche between wolf and red fox is remarkable, and the overlap between red fox and corsac fox is inapparent.

**Key words** wolf(*Canis lupus*) \_ \_ red fox (*Vulpes vulpes*) \_ \_ corsac fox (*Vulpes corsac*) \_ \_ Den \_ \_ habitat selection \_ \_ spatial nich

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