

GOLDEN JACKALS *CANIS AUREUS* EXTEND THEIR RANGE IN THE CARNIC ALPS (NORTH-EASTERN ITALY)

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Riassunto - Lo Sciacallo dorato *Canis aureus* estende il suo areale nelle Alpi Carniche (Italia Nord-orientale)

A conferma dell'espansione della popolazione europea dello Sciacallo dorato *Canis aureus* nell'ultimo decennio, si segnala l'individuazione di un nuovo gruppo nella bassa Val Degano (Friuli-Venezia Giulia). Si riportano inoltre osservazioni, riferite da cacciatori locali, effettuate in altre località delle Alpi Carniche che inducono a ritenere possibile l'esistenza di altri gruppi di sciaccalli, anche a quote elevate. I dati presentati confermano il consolidamento della popolazione del Friuli-Venezia Giulia e l'espansione di *Canis aureus* verso i settori più settentrionali delle valli e l'area alpina.

Parole chiave: Sciacallo dorato, *Canis aureus*, Alpi Carniche, Friuli-Venezia Giulia, Italia, Distribuzione, Quota.

Abstract - As a confirmation of the expansion of the golden jackal *Canis aureus* European population in the last decade, we report a new jackal group in the low Degano valley (Friuli-Venezia Giulia, North-eastern Italy) and present observations made by local hunters in other localities of the Carnic Alps that take into consideration the possible existence of other jackal groups also at high elevations. This confirms the consolidation of the jackal population of Friuli-Venezia Giulia and its expansion towards the northernmost sector of the valleys and the Alpine area.

Key words: Golden jackal, *Canis aureus*, Carnic Alps, Friuli-Venezia Giulia, Italy, Distribution, Elevation.

1. – Introduction

The golden jackal *Canis aureus* is one of the most widespread canid species, with a range covering areas of central, eastern and southern Europe, northern Africa and parts of Asia (ARNOLD *et al.*, 2011). From the early 1980s onwards jackals have expanded their range (ARNOLD *et al.*, 2011). In the last decade, there has been an increase in jackal records in areas previously unreported. The European jackal population continues to expand, particularly the Balkan populations towards central Europe, with an increased presence northwards and westwards of the distribution range (ARNOLD *et al.*, 2011).

Golden jackals are a relatively new arrival in Italy, where they are thought to have arrived from former Yugoslavia in the 1980s and colonised the extreme north-eastern region of Italy (LAPINI & PERCO, 1989). In the last decade jackals have expanded their range towards the north-west. A review of the data collected in Italy by LAPINI *et al.* (2011) found that the present distribution of the species in north-eastern Italy includes the Regions Friuli-Venezia Giulia, Veneto and part of Trentino-Alto Adige, and seems to be in increasing expansion. In Friuli-Venezia Giulia there are three to six reproductive jackal groups at present.

A survey carried out in the low valley of Degano Stream (Carnic Alps, Friuli-Venezia Giulia) using callback stations led to the identification of a new group. Herewith we present these observations and discuss their implications.

2. – Methods and study area

On 4th February 2012 a howling survey was performed to determine the presence of jackals, using the playback method described by GIANNATOS *et al.* (2005). The calling stations were set 2-2.5 kilometres apart in suitable locations according to the topographical characteristics in order to optimize sound transmission and avoid as much as possible sources of background noise. A recorded group-yip howl by three to four jackals was broadcasted at each calling station. Each howl broadcast lasted for 30 seconds and was followed by a 5 minute pause. If there was no response, this set of broadcast and pause was repeated six times on each calling station, for an overall session time of about 30 minutes. The direction of the caller was changed every two to three howls, depending on the landscape structure and the direction of the wind. In case of response the direction, the distance and the elevation of the responding jackals were recorded on a map. It was assumed that each response-direction coincided with a territorial group. The howls were played on a calm and dry night beginning one hour after sunset.

The study area was represented by the lowest sector (<1000 m a.s.l.) of the slopes of the Mount Arvenis range (46°28'N, 12°53'E) covered by woodlands (mainly of Beech *Fagus sylvatica* and Spruce *Picea abies*) alternated with grassland zones and grazing areas near human settlements either inhabited or abandoned.

Information about jackals was collected also from conversations with local hunters.

3. – Results and discussion

On 15th October 2011 at 660 m a.s.l. in the surroundings of the village of Cludinico (UM 34, Municipality of Ovaro) an individual was sighted.

On 4th February 2012 jackal howling were broadcasted from three calling stations and in one of them, located at about 700 m from the above sighting point, after the second broadcast a collective response was recorded 300-400 m away at an estimated elevation included between 800 and 850 m a.s.l. and at about 700 m from the nearest human settlement. The group replied again to a further broadcast.

The closeness of the two contacts induced us to think that they might refer to the same group.

The zone included between the sighting on 15th October 2011 and the response on 4th February 2012 is represented by a Beech and Spruce uneven-aged stand alternated with grassland areas on a predominantly west facing slope that degrades towards the Degano Stream located at about 450 m a.s.l..

The sighting of an individual, on 19th February 2012 on the Tagliamento River gravelly flood plain near the confluence of the Ribidis Stream (UM 34, Municipality of Enemonzo, 380 m a.s.l.), probably belonging to one of the groups reported by LAPINI *et al.* (2011), permitted to exclude the moving of the group from the Tagliamento valley to the Degano valley and confirmed the hypothesis that the data obtained in this research are related to a new group.

The presence of canids in vicinity of the village of Cludinico up to an elevation of 1000 m a.s.l., thought to be “loufs” (grey wolves *Canis lupus* in Friulan language) by some observers, was noticed also by local hunters and confirmed until the winter 2012-2013. It was also reported that in October 2012 an adult accompanied by a young was observed in the same area where the reply to the acoustic stimuli was heard.

Local hunters reported other sightings in the Municipality of Ovaro: one dating back to December 2009 (4 individuals near the village of Entrampo, UM 35, 650 m a.s.l.) and other two, dating back to October 2012, concerning single individuals respectively in locality Montuta of Ovaro (UM 35, 1200 m a.s.l.) and in vicinity of Casera Losa (UM 25, 1800 m a.s.l.). These sightings point to the possible existence of other jackal groups on Carnic Alps, also at high elevations. The Casera Losa record in particular is the highest elevation recorded for the species in Italy (Cf. LAPINI *et al.*, 2011).

These reports confirm the consolidation of the population of Friuli-Venezia Giulia, in conjunction with a similar trend in neighbouring Slovenia as verified by MIHELIC & KROFEL (2012), and the species expansion towards the northernmost sector of the valleys and the Alpine area, where it would be necessary to carry out a systematic monitoring aimed at assessing the real presence of the species.

The ongoing jackal expansion, similar in some aspects to that of other carnivores in north-eastern Italy, offers an opportunity to ascertain how a new species expands



Slopes of the Mount Arvenis range (Photo G. Rassati)

through “difficult” areas as the Alpine range. Elsewhere competition with the red fox *Vulpes vulpes* leading to a reduction of the latter has been reported (Cf. e.g. GIANNATOS *et al.*, 2005). At present this interaction seems limited, probably due to the scarcity of jackal in Friuli-Venezia Giulia. Grey wolves, recently returned to Friuli, could represent in the future a potential limiting factor for jackal distribution as this is already happening in the Balkan Peninsula (GIANNATOS *et al.*, 2005).

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