POPULATION STRUCTURE OF MIGRATING AND WINTERING REED BUNTINGS *EMBERIZA* SCHOENICLUS SCHOENICLUS IN NORTHERN SPAIN

ESTRUCTURA DE LA POBLACIÓN EN EL ESCRIBANO PALUSTRE EMBERIZA SCHOENICLUS SCHOENICLUS DURANTE EL PERIODO DE MIGRACIÓN E INVERNADA EN EL NORTE DE ESPAÑA

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SUMMARY.—Iberia is a very important wintering area for several species of European seed-eating passerines, including the reed runting Emberiza schoeniclus. The dynamics and structure of its wintering population remains unknown over large areas, especially in northern Iberia. This study aimed to test (1) whether northern Iberia is a stop-over region rather than a wintering area for non-breeding nominate race reed buntings; (2) whether sex and age ratios indicate a higher proportion of immature males and whether such ratios differ from those found in regions further south; (3) whether wing morphology varies at different stages of the non-breeding season, thus possibly revealing differential migration by different populations. Reed buntings were mist-netted weekly from October to April in a reedbed in the Ebro Valley, northern Iberia, between 2003 and 2009. The zone was used mainly by reed buntings stoppingover in this area during the autumn migration period but also, to a lesser extent, by an apparently stable population that overwintered in this zone. The high proportion of females supports the hypothesis that Iberia plays a major role as a destination area for female reed buntings during the non-breeding period. Seasonal variation in wing morphology suggests that populations of very distinct origin occur but the temporal patterns of their occurrence still remain unresolved. Our results suggest that longwinged reed buntings, which presumably have travelled from more distant regions, are more abundant in mid-winter.

Key words: age and sex ratios, Ebro Valley, flight-associated morphology, migration, ringing, sedentary, Spain.

RESUMEN.—La península Ibérica alberga durante el periodo no reproductor a un buen número de paseriformes granívoros de Europa, como el escribano palustre *Emberiza schoeniclus*. Su dinámica y estructura poblacional es desconocida en un amplio sector peninsular, especialmente en el norte de la Península. El objetivo en este artículo es comprobar (1) si el norte de la Península es empleado principalmente como área de paso o como área de invernada por los escribanos que vienen de otras zonas de Europa (subespecie *E. s. schoeniclus*); (2) si existe un sesgo poblacional hacia una mayor proporción de machos y jóvenes, y si este sesgo varía respecto a otras zonas situadas más al sur; (3) si la morfolo-

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gía de vuelo varía a lo largo de la estación no reproductora, sugiriendo la existencia de migración diferencial de poblaciones. Para ello, se capturaron escribanos palustres semanalmente, desde octubre hasta abril, en un carrizal del valle del Ebro, en el norte de la Península, entre 2003 y 2009. El carrizal se empleó principalmente como área de descanso durante el periodo de paso migratorio y, en menor grado, como zona de invernada de una población que, aparentemente, fue sedentaria. En cuanto a sexos, se observó un sesgo hacia las hembras que, de este modo, apoyaría la idea de que la península Ibérica juega un papel importante como área receptora de hembras durante el periodo no reproductor. La proporción de hembras en el norte peninsular fue menor que en otras zonas situadas más al sur. El patrón estacional de la morfología de vuelo apoya la existencia (o solapamiento) de poblaciones de distinto origen, aunque su patrón temporal de presencia en la zona se desconoce. Los individuos con alas más largas y apuntadas (presumiblemente de origen más lejano que los de alas cortas y redondeadas) fueron más abundantes hacia la mitad del invierno.

Palabras clave: anillamiento, España, migración, morfología asociada al vuelo, ratios de edad y sexo, sedentario, valle del río Ebro.

INTRODUCTION

Iberia is a very important wintering area for many of the seed-eating passerines that breed in Europe (Tellería *et al.*, 1999; Senar and Borras, 2004). As such, it plays a major role for the conservation of these species, whose population trends have been reported to be affected by over-winter survival (Peach *et al.*, 1999). Detailed knowledge of the spatio-temporal distribution of seed-eating passerines throughout their wintering areas in Iberia is hence of great importance, especially if we consider that it is common in migrants for timing, routes or distances travelled to differ between age classes, sexes or populations (Newton, 2008).

The reed bunting *Emberiza schoeniclus* is a common Palearctic songbird (Cramp and Perrins, 1994; Tellería *et al.*, 1999) with nine subspecies recognised in Europe, three of which occur in Iberia. Two of these: *E. s. witherbyi* in the east and the Balearics and *E. s. lusitanica* in northwestern Iberia, are both rare breeding residents (Atienza and Copete, 2003). The nominate subspecies *E. s. schoeniclus* is very common in winter (Prys-Jones, 1984; Villarán, 1999). Iberia is one of the main wintering grounds for western European reed bunting populations (Cramp and Perrins, 1994; Tellería et al., 1999). Overall, the origins and occurrence patterns of nominate race reed buntings in Iberia are relatively well understood: they arrive in September and leave the peninsula in March-April (Tellería et al., 1999; Villarán, 1999). In contrast, detailed analyses of the dynamics and structure of the passage and wintering populations are much less frequent and virtually all have focused on central Iberia (Villarán and Pascual-Parra, 2003; Mezquida and Villarán, 2006). northern Iberia, the Ebro Valley in particular, is a very important area for non-breeding west European reed buntings (Villarán, 1999) but little is known of their population dynamics there.

The number of individuals captured at a study site will be expected to peak, respectively, during the autumn and/or spring passages or during winter, depending on whether the area is used only or mainly by birds in transit or remaining to winter. Thus, if reed buntings overwinter mainly in southern Iberia, northern Iberia may be expected to be more importance as a stop-over region for birds travelling to or from their wintering areas further south. Seasonal patterns in the proportion of recaptures can additionally be used to explore whether or not an area is used as a settlement site for non-transient, wintering birds (Belda *et al.*, 2007). An increase in the frequency of recaptures through the winter is thus associated with the settlement of a wintering population.

Male reed buntings tend to remain closer to their breeding areas during the winter, giving rise to a decreasing proportion of males from north to south within the entire distributional range in winter (Pedroli and Gogel, 1972; Fennel and Stone, 1976; Villarán, 1999; but see Rubolini et al., 2000; Schmitz and Steiner, 2006; Schmitz et al., 2007). Thus, due to its southern location in Europe, northern Iberia would be expected to have a femalebiased sex ratio at least during the autumn and spring migrations, when a high number of females overfly the area on their way to wintering areas further south (Villarán, 1999). Consequently, males would be expected to be proportionally more abundant during midwinter than during passage periods. With respect to age, Villarán (1999) did not find significant latitudinal differences in age ratios for Iberia, but this was probably due to biases associated with the use of ringing recovery data (Leal et al., 2004). Again, if adults remain closer to their breeding sites, immature birds should be more abundant in northern than in southern Iberia. Furthermore, if adults have a higher rate of overwinter survival (Sullivan, 1989; Schmitz and Steiner, 2006), they should be proportionally more abundant during winter and/or spring than during autumn.

The wing morphology of reed buntings is shaped by their migratory behaviour, resident populations having shorter and more rounded wings than migratory populations (Copete *et al.*, 1999). Thus, whether such pattern is also found between short- and longdistance migrants (Fiedler, 2005), seasonal variations in wing morphology (or flight morphology) of newly captured birds could be used to infer an occurrence of migrants with different migratory distances. The present study aimed to test:

- (i) Whether northern Iberia is a stopover region rather than a wintering area for non-breeding nominate race reed buntings.
- (ii) Whether sex and age ratios indicate a higher proportion of immature males and whether such ratios differ from those found in regions further south.
- (iii) Whether wing morphology varies at different stages of the non-breeding season, thus possibly revealing differential migration by different populations.

MATERIAL AND METHODS

Sampling site and ringing protocol

Reed buntings were mist-netted at a constant effort site at Badina de Escudera, a 57 ha lagoon at Villafranca, Navarra, northern Spain (42° 16' N, 01° 42' W; fig. 1). Badina de Escudera is in the Ebro Valley, which is thought to be a major ecological corridor for non-breeding reed buntings (Villarán, 1999). Numerous reed buntings are captured at Badina de Escudera (Arizaga et al., 2009) and the site is likely to provide representative sampling of the nominate race reed buntings that move through the region. The vegetation at Badina de Escudera comprises a belt of reedbeds surrounding an area of open water. Reedbeds are used as roost sites by both migrant and wintering reed buntings (Mezquida et al., 2005; Arizaga et al., 2009). Sampling took place in the evenings, from two hours before dusk until one hour afterwards, as the buntings arrived at their roosts. Mist-netting took place twice a fortnight between August and April, beginning in August 2002 and ending in April 2009. Mist nets were erected at the same sites during each netting campaign but their extent varied



FIG. 1.—Location of Badina Escudera. Left: The region of Navarra (dark area), in southwestern Europe. Right: Badina de Escudera (black point, indicated by an arrow), situated near the main rivers in Navarra: Aragón, Arga and Ebro.

[Localización de Badina de Escudera. Izda.: Navarra (área oscura), en el suroeste de Europa. Dcha.: Badina de Escudera (punto negro, indicado mediante la flecha), situada en la proximidad de los ríos más importantes de la región: Aragón, Arga y Ebro.]

between campaigns: 72 m usually, but 96 m in 2003/04, 120 m in 2004/05 and 180 m in 2005/06. The nets covered a reedbed area of 4-6 ha. A reed bunting netting campaign extended from each October until the following April, since the birds were only trapped during this period.

Each captured bird was ringed, and sexed and aged according to the criteria in Svensson (1996). Reed buntings were aged as immatures (EURING codes 3 or 5): birds with some juvenile feathers in their wings and tails and in their first calendar year, or adults (EURING codes 4 or 6): older birds with no juvenile feathers in their wings and tails. We also recorded wing length (\pm 0.5 mm; method III following Svensson, 1996), primary feather lengths (\pm 0.5 mm; P1 to P9, numbered from innermost to outermost) and tarsus length (\pm 0.1 mm).

Data analyses

Calendar months were used as the time unit for the analyses. Shorter periods were not used since the chief aim was to obtain average figures allowing us to identify general patterns, rather than to focus on very detailed seasonal aspects. Because all means are given \pm dispersion statistics, such statistics were used to quantify the yearly-associated variations and hence to evaluate the representativeness of the means.

The number of captures per day was standardised for a sampling effort of 100 linear metres of mistnets. Standardised capture data did not fit a normal distribution (K-S test, p < 0.001) and showed high overdispersion (mean/SD = 0.87), so they were root-transformed to be normalised (K-S test: p = 0.762, mean/SD = 0.52). We used Univariate Linear Models (ULM) to test for possible seasonal variations of captures.

An individual was considered only once per month for the remaining analyses of seasonal patterns (proportion of recaptures, age and sex ratios, wing morphology). We used stratified Cochran-Mantel-Haenszel (CMH)

TABLE 1

Factor loadings of each variable for the components one (PC1) and two (PC2) derived from a Principal Component Analyses used to assess the wing morphology of reed buntings.

[Peso de los factores que se obtuvieron para cada variable en cada uno de los componentes (PC1 y PC2) derivados de un Análisis de Componentes Principales empleado para hallar una variable que resumiera la morfología de vuelo de los escribanos palustres.]

	PC1	PC2
Tarsus length Wing length Wing morphology	0.299 0.877 -0.778	0.917 0.093 0.458
Eigenvalue Explained variance (%)	1.463 48.8	1.060 35.3

tests to look for seasonal variation in the proportion of recaptures and in age and sex ratios. In relation to wing morphology, we performed a Principal Component Analysis (PCA) on tarsus length (used here as a proxy of body size; Senar and Pascual, 1997), wing length and wing structure (using C2 index as in Lockwood et al., 1998) (table 1). Positive values of PC1 were linked with relatively longer, more pointed wings, whilst positive values of PC2 were associated with birds with longer tarsi and more rounded wings. Therefore, PC1 was used to assess the wing morphology of reed buntings. With a slightly positive skewed distribution, PC1 values did not fit a normal distribution (Kolmogorov test: p < 0.001) but they were symmetrically distributed and not over-dispersed (SD/mean < 0.15). Thus, we used parametric ULM, which provides good support for slight biases from the normal distribution, with months, age and sex as control factors. Campaigns were clustered and thus not included as an additional factor, due to sample size constraints (appendix 1).

All means are given \pm 95% CI (where the data fitted a normal distribution) or medians \pm 25 and 75 percentiles (where the data did not fit a normal distribution). Statistical analyses were carried out with SPSS 18.0 software.

RESULTS

Temporal distribution of captures and proportion of recaptures

The mean number of captures varied between months ($F_{6,48} = 40.8$, p < 0.001), with a single peak in November, thereafter decreasing until April (fig. 2). Moreover, the variance was greater within the first three months, indicating that the mean number of captures varied more between years from October to December than during subsequent



FIG. 2.—Mean number of captures per day (standardised per 100 m of linear mist nets; $\pm 95\%$ CI) of reed buntings at Badina de Escudera. Captures were root-transformed in order to fit to the normal distribution. Letters over the bars show the existence of significant differences among months after an *a posteriori* Tukey-B test (F_{Levene} ; p > 0.05); same letters lump months without significant differences among each other.

[Número promedio de capturas de escribano palustre por día de muestreo (estandarizado a 100 m de redes; \pm 95% IC) en Badina de Escudera. Los meses con una misma letra son aquellos entre los que no hubo diferencias significativas tras un análisis a posteriori de Tukey-B (F_{Levene} ; p > 0.05).]

months. After controlling for year, the proportion of recaptures varied between months (CMH test: $\chi_5^2 = 241.6$, p < 0.001; months with no recaptures excluded). The proportion of recaptures tended to peak by February, thereafter decreasing by March (no recaptures occurred in April; fig. 3). However, the high variance observed from January to subsequent months, compared with the variance for November and December, reveals that the proportion of recaptures varied largely between different years from January onwards.

Concerning individual recapture histories (fig. 4):

- (1) Most recaptures (54.1%) occurred during the month following the first capture event.
- (2) 61.5% of recaptured buntings were ringed during the autumn migration

period (October-November) and recaptured in subsequent months.

(3) No recaptures were obtained in April, although only four were caught that month.

Age and sex ratios

Overall, immature reed buntings (55.8% of captures) outnumbered adults but this proportion varied seasonally after controlling for year (CMH test: $\chi_6^2 = 72.9$, p < 0.001). The proportion of adults tended to increase from October to January, with a peak around mid-winter (fig. 5). Although the proportion of adults tended to decrease in March and April, the lower sample sizes and the high year-associated variance in March and April precluded us from obtaining significant differences.



FIG. 3.—Proportion of within-campaign recaptures (median \pm 25 and 75 percentiles; pooled data for all years) of reed buntings at Badina de Escudera. We considered each bird only once per month and campaign, so the proportion of recaptures for October is zero by definition. Letters over the bars show the existence of significant differences among months after pairwise CHM tests; same letters lump months without significant differences among each other. Together with months we show the number of captures + recaptures.

[Proporción de recapturas (mediana ± percentiles 25 y 75; datos de todos los años considerados en conjunto) de escribanos palustres en Badina de Escudera. Cada ejemplar ha sido considerado sólo una vez por mes y campaña, por lo que la proporción de recapturas en octubre es cero. Los meses con una misma letra son aquellos entre los que no hubo diferencias significativas tras un análisis de CHM mes a mes. Junto al mes se indica el número de capturas y recapturas.]





[Proporción (%) de cada uno de los historiales de recapturas hallados en Badina de Escudera. Cada ejemplar ha sido considerado sólo una vez por mes y campaña.]



FIG. 5.—Mean proportion (\pm 95% CI) of age and sex ratios across the season. Letters over the bars show the existence of significant differences among months after pairwise CHM tests; same letters lump months without significant differences among each other. Together with months we show the number of reed buntings captured (each bird was considered only once per month and campaign) with known age and sex.

[Proporción media (\pm 95% IC) de cada sexo y edad. Los meses con una misma letra son aquellos entre los que no hubo diferencias significativas tras un análisis de CHM mes a mes. Junto al mes se indica el número de capturas (cada ejemplar ha sido considerado sólo una vez por mes y campaña) de edad y sexo conocido.] Most birds (64.1%) were females but sex ratios also differed seasonally after controlling for year ($\chi_6^2 = 45.3$, p < 0.001), with males being more abundant during winter and with a peak in January (fig. 5).

Wing morphology

Flight-associated morphology (summarised in a single variable, PC1; table 1) varied seasonally and between age classes and sexes (table 2). Overall, sex accounted for most (32.8%) of the variation explained by these three factors with females having shorter, more rounded wings than males (-0.58 ± 0.05, n = 691 versus 0.91 ± 0.07, n = 439). Adult reed buntings captured at the beginning and at the end of the season tended to have a significantly shorter and more rounded wing than those captured from November to February ($F_{5,504} = 3.0$, p = 0.011; fig. 6). Although the ULM revealed significant seasonal differences for immatures ($F_{5,624} = 2.5$, p = 0.030), such differences were undetected by an *a posteriori* Tukey-B test (fig. 6).



FIG. 6.—Age-dependent (mean \pm 95% CI; open dots, immatures; filled dots, adults) seasonal patterns of flight-associated morphology (positive values of PC1 are associated with birds with a longer, more pointed wing, whilst negative values are linked with a shorter, more rounded wing). Only adults showed significant seasonal differences; in this case same letter lump mean values without significant differences among each other, according to an *a posteriori* Tukey-B test.

[Patrón estacional de la morfología de vuelo según edades (media \pm 95% IC; puntos claros, jóvenes; puntos negros, adultos; los valores más altos del PC1 se asocian a alas más largas con un apuntamiento mayor y los valores más bajos se asocian a alas más cortas y redondeadas. Sólo en adultos se observaron diferencias estacionales (los meses con una misma letra son aquellos para los que no hubo diferencias significativas tras un análisis a posteriori de Tukey-B).]

TABLE 2

Univariate Linear Models used to estimate the effects of period (month), age class and sex on the flightassociated morphology of migrating and wintering reed buntings. Flight-associated morphology was assessed with the component one (PC1) derived from a Principal Components Analysis on tarsus length, wing length and wing morphology (table 1). Data from April have been excluded due to the very low sample size.

[Modelos Lineales Univariantes utilizados para determinar el efecto del mes, la edad y el sexo en la morfología de vuelo de los escribanos palustres que se capturaron en migración e invernada. La morfología de vuelo se estimó a partir del PC1 derivado de un Análisis de Componentes Principales en el que se incluyó la longitud y morfología del ala así como la longitud del tarso (tabla 1). Los datos de abril se han excluido por el reducido tamaño muestral.]

Factor	SS	df	F	р
Month	2.382	5	1.168	0.323
Age	34.972	1	85.755	< 0.001
Sex	370.757	1	909.138	< 0.001
Month×Age	5.282	5	2.590	0.024
Month×Sex	1.977	5	0.969	0.435
Age×Sex	0.729	1	1.787	0.182
Month×Age×Sex	1.918	5	0.941	0.454
Error	451.039	1106		

DISCUSSION

Distinguishing between migration and wintering periods

Reed buntings captures showed a single peak in November, coinciding with the autumn migration period (Villarán, 1999). This demonstrates that the site was used mainly by stopping-over migrants during the autumn. This contrasts with results from southern Iberia, where abundance peaks during the winter (e.g., De la Puente *et al.*, 2003). The lack of a capture peak in March and April suggests that reed buntings did not stop-over in the study area in spring, possibly because they overfly the region in order to reach their breeding sites as soon as possible (Newton, 2008). Therefore, two principal periods can be distinguished at Badina de Escudera: the autumn migration period, from October to November, and the winter, from December onwards, with a final phase (March-April) when all the birds depart.

More than 60% of the birds recaptured after November had already reached the area during the autumn migration period, supporting the hypothesis of a temporal overlap between presumed onward migrants, that were captured only in autumn and never recaptured afterwards, and resident wintering buntings.

Age and sex ratios

The increasing proportion of adults up to February can be explained in terms of agedependent mortality: with immature birds having lower survival rates (Schmitz and Steiner, 2006), or of differences in the migration distances between age classes. With respect to the latter hypothesis, our data accord with the idea that immature birds may overwinter further south than adults. Though this is a very common phenomenon among migratory birds (Cristol et al., 1999), largescale analyses, such as that of Catry et al. (2006) for blackcaps Sylvia atricapilla, are lacking for reed buntings, so the possibility of age-related differential migration of this species still remains unconfirmed. The decreasing frequency of adults in March and April may be due to their departing earlier than wintering immatures and/or to immatures that winter further south reaching Badina later than adults during their return to their breeding areas.

Males were proportionally more abundant during mid-winter, peaking at 40% of captures in January, than in autumn or late winter/spring, supporting the hypothesis that females migrate to winter further south (Prys-Jones, 1984). This figure was below the mean frequency reported in areas further north: 70% in Switzerland, Pedroli and Gogel, 1972; 50-60% in central France, Dulphy et al., 1997), but it is higher than the 25% average for central Iberia (Villarán and Pascual-Parra, 2003). Although the southward decrease in the proportion of male reed buntings appears to be quite consistent, we cannot rule out the existence of small-scale variations that could be associated with the habitat use, year, food availability, social status or meteorological conditions (Prys-Jones, 1984; Rubolini et al., 2000).

Our data also support the suggestion that males depart earlier for their breeding areas (Pedroli and Gogel, 1972; Fennel and Stone, 1976; Villarán, 1999; Villarán and Pascual-Parra, 2003). Males that return early to their breeding areas are more likely to settle in a good territory as well as to find a mate, so males are under a much stronger selection pressure than females for early arrival (Rubolini *et al.*, 2004).

Wing morphology

Seasonal variation in flight-associated morphology was detected, although it was not significant for immatures. Reed buntings captured by mid-winter had longer and more pointed wings than those captured at the beginning and the end of the season. Assuming that longer and more pointed wings are associated with increasing migration distances (Mönkkönen, 1995; Arizaga et al., 2006), our results suggest that the proportion of reed buntings that originated from the more distant regions was higher during mid-winter. This would not agree with the leap-frog migration pattern described for the species in Europe, according to which northern birds overwinter in areas further south than the intervening populations (Prys-Jones, 1984). However, even accepting such a pattern, we cannot rule out some complementary hypotheses. In particular, some Scandinavian (long-winged) reed buntings overwinter in southern France, and they may reach Spain when wintering conditions in France are harsh (Elkins, 1983; Prys-Jones, 1984). Also, Iberia is one of the chief wintering areas for European reed buntings (Prys-Jones, 1984; Cramp and Perrins, 1994; Tellería et al., 1999) and the regional geographical distribution of the many populations that converge on this region is largely unknown. Therefore, we cannot reject the possibility that longwinged birds might overwinter further north than others from presumably more southern regions (Domínguez et al., 2007). Alternatively, it is also likely that the lower proportion of birds with shorter and more rounded wings found in October and March was due to fewer males being caught during these months, since they reach Badina later and leave the area before the females (see Villarán and Pascual-Parra, 2003 for similar results).

Overall, adults and males had a flight morphology that is more typical of long-distance migrants. Since, as shown above, they migrate shorter distances, these results could be interpreted in terms of different selection pressures, such as predation (Kenward, 1978; Perez-Tris and Tellería, 2001; Swaddle and Lockwood, 2003) or sexual selection (Borras *et al.*, 1998).

CONCLUSIONS

Our reed bed in the Ebro Valley was used mainly by reed buntings that stopped-over there during the autumn migration period. It was also used to a lesser extent by an apparently winter-resident population. Iberia, especially the south, is a major wintering region for female reed buntings and hence is of great importance for the conservation of this seed-eating songbird, which is still in decline in several European countries (Donald et al., 2001; Tucker and Heath, 2004). Populations from very different points of origin occur but the temporal patterns of their occurrence still remain unknown. Our results suggest that long-winged reed buntings, that presumably come from more distant regions, are more abundant during mid-winter.

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Appendix 1

Number of reed buntings captured at Badina de Escudera. In brackets, number of birds of known age and sex and with all measurements (wing and tarsus length, wing morphology) recorded. Each bird is considered only once per month and campaign. Owing to the low sample size (n = 4), April was excluded from morphological analyses, so these birds have not been considered in this appendix.

[Número de escribanos palustres capturados en Badina de Escudera. En paréntesis, número de aves de edad y sexo conocido y con todas las medidas (longitud del ala y tarso y morfología del ala) tomadas. Cada ejemplar ha sido considerado sólo una vez por mes y campaña. Debido al reducido tamaño muestral (n = 4), el mes de abril se ha excluido de los análisis morfológicos, por lo que este mes no se ha incluido en este apéndice.]

	Immatures		Adults	
Campaign	Males	Females	Males	Females
2002-2003	239 (0)	496 (0)	178 (0)	271 (0)
2003-2004	112 (97)	235 (202)	109 (102)	160 (146)
2004-2005	276 (133)	464 (191)	167 (91)	293 (135)
2005-2006	279 (0)	545 (0)	300 (0)	454 (0)
2006-2007	69 (0)	214 (0)	130 (11)	262 (14)
2007-2008	107 (0)	182 (1)	78 (1)	140 (5)
2008-2009	137 (3)	224 (0)	124 (1)	176 (0)