

The Andean Swallow (*Orochelidon andecola*) in Argentina

Juan Mazar Barnett^{1,14}, Germán D. Pugnali², Mark Pearman Morrison^{3,14}, Alejandro Bodrati^{4,14}, Flavio Moschione⁵, Ricardo Clark⁶, Ignacio Roesler^{7,14}, Diego Monteleone^{8,14}, Hernán Casañas⁹, Freddy Burgos Gallardo^{10,14}, José Segovia^{10,14}, Luis Pagano^{11,14}, Hernán Povedano¹², & Juan I. Areta^{13,14,15}

¹ Deceased

² 25 de mayo 758 10°G, 1002, Buenos Aires, Argentina.

³ Del Ombú 1683, Parque Leloir, 1714 Ituzaingó, Buenos Aires, Argentina.

⁴ Los Ceibos 1695, 1607 Villa Adelina, Buenos Aires, Argentina.

⁵ Delegación Regional Noroeste Argentino-Administración de Parques Nacionales, Santa Fe 23, 4400, Salta, Argentina.

⁶ Mariano Moreno 1950, 4401 San Lorenzo, Salta, Argentina.

⁷ Calle 2 N°1187, 1900 La Plata, Buenos Aires, Argentina.

⁸ Magallanes 1640, 1878 Quilmes, Buenos Aires, Argentina.

⁹ Relinchos, Cruz Grande, 5178 La Cumbre, Córdoba, Argentina.

¹⁰ Secretaría de Gestión Ambiental-Jefatura de Gabinete de Jujuy. Sarmiento 154, 4600 Jujuy, Argentina

¹¹ Taller de Taxidermia, División Zoología Vertebrados, Museo de La Plata, FCNyM (UNLP), Paseo del Bosque s/n1900 La Plata, Buenos Aires, Argentina.

¹² Dirección de Areas protegidas, Secretaria de Medio Ambiente de la Provincia de Rio Negro, Colón 275, Viedma (8500), Rio Negro, Argentina.

¹³ IBIGEO-CONICET, Mendoza 2, 4400, Salta, Argentina.

¹⁴ Grupo FALCO, www.grupofalco.com.ar

¹⁵ Corresponding author: esporofila@yahoo.com.ar

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ABSTRACT: During ornithological studies in the provinces of Jujuy, Salta, and San Juan, we recorded the Andean Swallow *Orochelidon andecola* at 40 localities. These are the first records in Argentina, and also represent the southernmost for the species. Some of these localities are up to 1500 m lower than the previously known elevational limit (now 800 masl), and up to 1100 km southwards. This is a relatively poorly known swallow, and we present novel natural history data. We found evidence of breeding in five localities. We obtained photographs and tape recordings, and provide details of a specimen.

KEY-WORDS: altitudinal distribution, geographical distribution, *Orochelidon andecola*, natural history, seasonal movements.

The Andean Swallow *Orochelidon andecola* is locally common from Ancash, Perú, to Potosí and Tarija in Bolivia and Tarapacá in Chile. The elevational range extends between 2500-4600 masl, with the lowest elevation records coming from the Austral winter (Ridgely & Tudor 1989, Fjeldsá & Krabbe 1990). Turner & Rose (1989) report it as occasional below 2500 masl and Hennessey et al. (2003) report it down to 2300 masl.

Some authors have speculated on its presence in Argentina (Turner & Rose 1989, Fjeldsá & Krabbe 1990), but so far, there is no formally published evidence of its presence in the country. During our ornithological studies in the provinces of Jujuy, Salta, and San Juan we recorded the species in numerous localities, confirming pre-existing speculations. In this contribution we describe these records, extending the latitudinal and longitudinal distribution of the Andean Swallow considerably, and

provide data on behavior, habitat use, and breeding of the species in Argentina.

Materials and Methods

Data reported in this study were gathered opportunistically during general surveys in northwestern Argentina by all the authors. We report information obtained up to September 2008 (some records were briefly described in Mazar Barnett and Pearman [2001]), including data on a specimen which was collected and deposited at the Museo Argentino de Ciencias Naturales, Buenos Aires (MACN). Sound recordings were made with a Sony TCM-5000 EV tape recorder and a Sennheiser ME-66 shotgun microphone and are deposited in the Macaulay Library of Natural Sounds, Cornell Lab of Ornithology,

New York, and in the Colección Nacional de Sonidos Naturales, MACN, Buenos Aires. Coordinates for each locality were obtained with a GPS, through topographical charts, or from Google Earth.

Geographic distribution

We obtained 68 records of Andean Swallows in 40 localities (Table 1). The group observed on 27 September 1997 at Quebrada Sacha Runa (Table 1, record 2) was tape recorded. An adult of unknown sex was collected in this site (specimen number MACN54897), with the following measurements: wing chord: 107.3 mm, bill (tip to base of skull): 10.8 mm, bill (tip to anterior border of nares): 4.8 mm, tarsus: 12.0 mm, and tail: 51 mm. Other documented records include one bird photographed at Río Peñas Negras (Table 1, records 4-6) and several tape-recorded at Santa Ana (Table 1, record 25).

Behavioral notes

The species was generally recorded in small groups of 2-10 individuals, although we also recorded single birds and groups of 40-100 individuals rarely (records 1, 23, 26, and 41). At Valle Colorado we observed approximately 100 individuals at dusk on 16 August 1996, flying 1-4 m above the Valle Colorado River. Here, groups of up to 25 individuals were observed during the day moving over a short section of river back and forth while capturing insects. Every once in a while, they gathered together, flew upwards, and circled while vocalizing, resuming their feeding behavior over the river afterwards. The same pattern was observed the next day, although the large flock now flew 100-200 m above the river.

The vocalizations we heard and recorded were soft warbles, somewhat trilled or of harsh quality: *rruí trr-rúi?* or *r'ruíp tzrruíp?*

On numerous occasions, Andean Swallows were observed together with blue-and-white swallow *Pygochelidon cyanoleuca*, once with a group of Andean swift *Aeronautes andecolus*, and once with barn swallows *Hirundo rustica*. We could always distinguish Andean swallows from blue-and-white swallows by the lack of dark undertail coverts, squarer and less-forked tail, dark throat patch extending into the upper chest, and less vivid blue dorsal coloration in Andean Swallows.

Breeding

We obtained breeding data at five localities (Table 1). Three pairs were thought to be breeding at Molulo in December 1995 (Table 1, record 35). A group at Quebrada Sacha Runa on 27 September 1997 (Table 1, record 2) flew over a territory roughly 500-m long, either close to the water or near the ground on the eastern side

of its border. The individuals flew around a hole in the bank, with one of them perching on it once. Given the time of the year, we suspect that the swallows were investigating this hole to breed. We could not confirm if the tunnel was excavated by the swallows or not. The tunnel was located at the base of the cliff, approximately 2 m up, in an area where it became more vertical, just below a rock, where the substrate was more humid and softer. The entrance was sparsely covered by dense moss and lichen which grew on the ground. The shape and placement of the nest agreed with that described by Johnson (1967) and with our previous experience of nesting Andean Swallows in northern Chile. On 16 December 2006 at least five pairs were nesting in low-lying banks at Cochino (Table 1, record 24), on 4 August 2007 some adults were feeding fledglings at Morro del Alisar (Table 1, record 40), and on 4 February 2008 some groups contained both adults and juveniles at Abra Honda (Table 1, record 16).

Habitat

The dominant vegetation in areas where we recorded Andean Swallows was low montane scrub, generally open, sometimes dry and degraded. In general, *Baccharis* sp. shrubs were abundant in areas with varying humidity and cover. We also recorded Andean Swallows in small patches of *Polylepis* sp. (scarce in the region due to habitat disturbance by overgrazing and logging), and grasslands of varying humidity depending on local conditions (once in *Cortaderia selloana*), above the treeline ('ceja de bosque'). A few records in foothill and montane Yungas forests are notable. Among the dry areas, we found the swallows in areas within the Puna Plateau, with dry, low, and sparse vegetation, on slopes and rocky slopes with short grass (with some shrubs and *Baccharis* sp. shrubland in areas with higher humidity), and other typical Puna habitats. The southernmost records also deserve special mention, as they occurred in the Monte desert (Cabrera 1971), with creosote *Larrea* sp., *C. selloana*, and *Juncus balticus* along a creek (Table 1, records 66-68).

Most of our records of Andean Swallows came from humid river gullies on the east slopes of the sub-Andean ranges or in humid gullies in other ranges, reaching a total of 26 (65%) localities at the treeline, above the montane Yungas forest (Table 1, Figure 1). However, the species was also found in 14 (35%) localities in the dry Puna or Altiplano between 2550 and 4000 masl (Table 1, Figure 1). This pattern is remarkable, given that the literature only mentions dry Puna habitats for this species (Turner & Rose 1989, Ridgely & Tudor 1989, Fjeldsá & Krabbe 1990). This distinction is clearly evident in the shading shown in the map by Fjeldsá & Krabbe (1990: 534), which in southern Bolivia includes only the Altiplano. Nevertheless, S. Mayer (pers. comm.) recorded Andean

Swallows in Bolivia in habitats similar to those in which we recorded them in Argentina.

The literature gives a lower altitudinal limit of 2500 masl for Andean Swallows (Turner & Rose 1989, Fjeldså & Krabbe 1990; but down to 2300 m asl in Hennessey et al. 2003). Several of our records represent range extensions of its altitude, with the lowest record at 800 masl (Table 1, record 37). We also extend the southern distribution limit of the species by more than 1100 km (Figure 1). Based on the large number of records presented here, we suggest that the species is fairly uniformly distributed in north-west Argentina, being locally frequent to common. We predict that the species will be found in the provinces of Catamarca, La Rioja, Tucumán, and Mendoza, which intervene the northernmost and southernmost records in Argentina and which have suitable habitats for this swallow.

Seasonality and migration

Records in Argentina spanned all the seasons and occurred over ten months (there were no records for May and June; perhaps due to lack of sampling). We consider the Andean Swallow to be a resident species in Argentina, although it may conceivably make local movements, especially elevationally, depending on climatic fluctuations. Some evidence suggests the existence of at least local movements. At the Cuesta del Obispo, Salta, a locality regularly visited by observers, the species was recorded during only certain visits. The lowest-elevation record at 800 masl in PN Calilegua (Table 1, record 37) came from

mid-winter, and occurred during some particularly cold days, which may indicate that some individuals respond to short-term climatic fluctuations. The Andean swallow, and three other swallows recorded at PN El Leoncito, San Juan, were absent during winter in this locality. It is possible that latitudinal movements may explain this pattern, at least in the southernmost populations of the species. Nevertheless, it is difficult to judge the movements of Andean swallows in Argentina, given that our winter records span 800 to approximately 4000 masl.

Final thoughts

Although the species is considered as locally common, it is generally observed in small groups (Ridgely & Tudor 1989, Fjeldså & Krabbe 1990). Hence, the finding of groups of some 40-45 individuals at Laguna Los Enamorados and Cieneguillas, and of over 100 individuals in Valle Colorado and Río Yala, Jujuy, suggest regular formation of flocks before and after the breeding season. A large concentration of several thousands was reported at Laguna Tacahua, Perú (J. Fjeldså in Turner & Rose 1989).

The population in Argentina seemingly belongs to the nominate subspecies based on its geographic proximity. The name *golondrina puneña* was coined in the past for the species (Mazar Barnett & Pearman 2001), however, we feel that the variety of habitats it uses makes this name inaccurate. We thus suggest the common Spanish name *golondrina andina*, which better reflects its broader habitats and agrees with its scientific and English names.

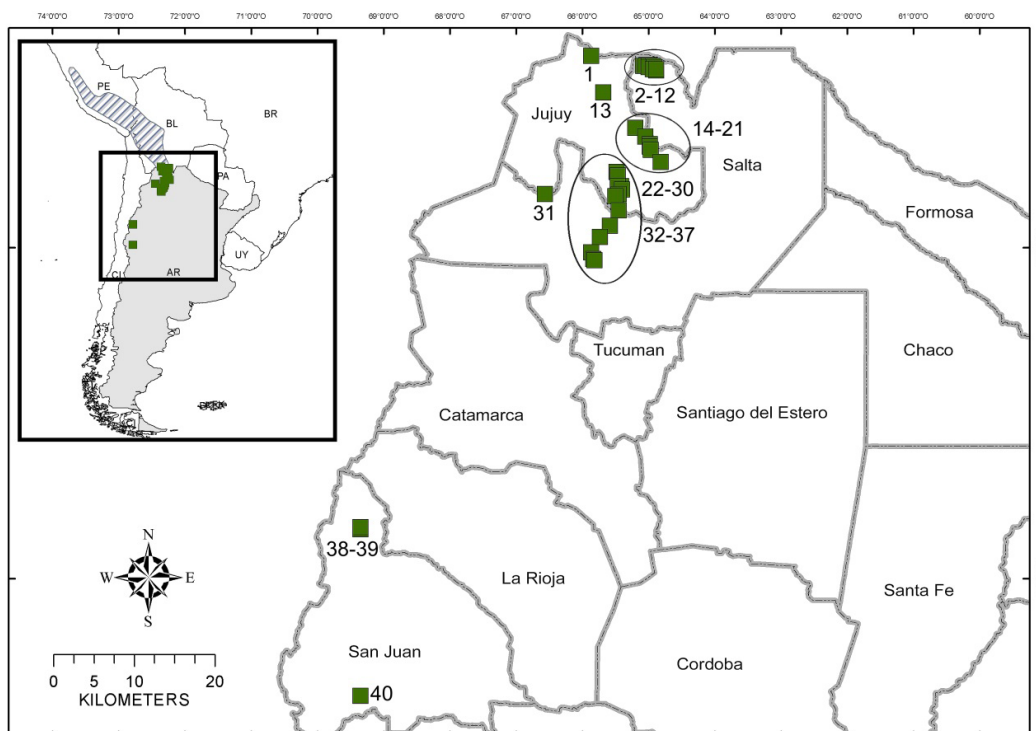


FIGURE 1. Distribution of Andean swallow *Orochelidon andecola* in Argentina. Localities are numbered consecutively from north to south (see Table 1 for details).

TABLE 1. Details of 68 records of Andean swallow *Orochelidon andecola* reported in this work, ordered by increasing latitude. Map number refers to numbers in Figure 1. Numbers of each record are the same as those cited in the text. Habitat column indicates D for dry habitats and H for humid habitats. When D or H is in parentheses it indicates intermediate habitat humidity, but closer to the letter being displayed.

Map	Record	Locality	Geographic coordinates	Elevation (masl)	Date	Number of individuals	Comments	Habitat	Observer
1	1	Cieneguillas, Jujuy	22°06'S, 65°52'W	3680	4 Jul 2007	40-45	Flying over sparse, dry, short shrubs on the outskirts of town.	D	JIA
2	2,3	Quebrada Sacha Runa, Salta	22°14'S, 65°02'W	2900	27 Sep 1997; 1 Dec 2003	5; 5	Over an open <i>Polylepis</i> sp. woodland, <i>Baccharis</i> sp. shrubland, and ground densely covered by herbaceous vegetation, mosses, lichens, and ferns. The group observed in 1997 kept a territory and visited a nest on a slope; voices recorded and one individual collected (see text).	H	JMB, GP and M. della Seta; JMB
3	4-6	Río Peñas Negras, Salta	22°15'S, 65°05'W	3400	6 Aug 1998; 15 Mar 2001; 29 Oct 2001	6	Over humid grasslands and shrublands above treeline. One individual photographed.	H	MP and R. Johnson; MP; MP
4	7-10	Río Trancas, Salta	22°15'S, 65°03'W	3150; 3350	6 Aug 1998; 13 Aug 2003; 2 Dec 2003 (x2)	4; 6; 5; 2	Last record of two birds at 3350 masl. Similar habitat to previous record.	H	MP and R. Johnson; MP; JMB; JMB
5	11-12	Between Rodeo Pampa and Sta. Victoria, Salta	22°15'S, 65°03'W- 22°15'S, 64°58'W	3050- 2400	4-6 Aug 2003	2-6	Groups above river gullies, mostly on montane shrubland with few <i>Polylepis</i> sp.	H	IR
6	13-15	W of Santa Victoria, Salta	22°15'S, 65°00'W	2650	26 Sep 1997 (x2); 1 Dec 2003	4; 5; 2	Flying over a small shrubby quebrada with a small patch of open <i>Polylepis</i> woodland; another group in the higher parts of an abrupt cliff over the Santa Victoria river.	H	JMB, GDP and M. della Seta (x2); JMB
7	16	Abra Honda, Santa Victoria Oeste, Salta	22°15'S 64°56'W	2725	4 Feb 2008	4-13	Flying over a group of houses. Groups with adults and juveniles.	H	FBG
8	17	Between Santa Victoria and Acoite, Salta	c. 22°16'S, 65°00'W	2400- 2550	7 Aug 1998	15	Disperse individuals.	D	MP and R. Johnson
9	18	Above Piscuno, Salta	22°16'S, 64°55'W	3300	5 Dec 2003	1	Over dry and rocky slopes with short grass.	D	JMB

Map	Record	Locality	Geographic coordinates	Elevation (masl)	Date	Number of individuals	Comments	Habitat	Observer
10	19	El Chorro, Salta	22°18'S, 64°56'W	3200	3 Dec 2003	1	Shallow quebrada with high-Andean vegetation, <i>Baccharis</i> sp., and shrubs.	D	JMB
11	20-21	Quebrada del arroyo Cañaní, Salta	22°18'S, 64°54'W; 22°19'S, 64°53'W	2900; 2700	3 Dec 2003; 5 Dec 2003	3	Deep and humid quebrada with humid grasslands in humid patches of <i>Baccharis</i> sp. and <i>Polyepis</i> sp.	H	JMB
12	22	Tipajo, Santa Victoria Oeste, Salta	22°18'S 64°53'W	2939	7 Feb 2008	3	Above Arroyo Tipajo.	H	FBG
13	23	Laguna Los Enamorados, Abra Pampa, Jujuy	22°43'S, 65°42'W	3470	6 Oct 2003	40-45	In flight over a dry area with few sparse shrubs.	D	JIA
14	24	Santa Ana, Cochinoca, Jujuy	23°11'S 65°12'W	4079	16 Dec 2006	10+	At least 5 pairs nesting on a natural wall c. 3 m high, with holes 2 m above the ground.	D	IR
15	25	Santa Ana, Valle Grande, Jujuy	23°19'S, 65°03'W	3500	20 Aug 1996	8	Over a dry creek; rocky area covered by grasses. Tape-recorded.	D	JMB
16	26-27	Caspalá, Jujuy	23°21'S, 65°5'W	3070	Jan 1996	3; 16		D	HP
17	28-32	Valle Colorado, Jujuy	23°26'S, 64°59'W	1800- 1900	16-18 Aug 1996; 21 Jul 2000	10; 25; 20-40 +100 (x2)	From 2 km S of the town, in the town, and on slopes above it. Montane scrub somewhat dry and degraded. In 2000 > 100 individuals, perhaps the same as in 1996.	H	JMB, AB, and G. Bodrati (x3); IR and DM
18	33	Valle Grande, Jujuy	23°28'S, 64°59'W	1650	20 Jul 2000	5	Over disturbed montane forest.	H	IR
19	34	Between Alro Calilegua and Valle Grande, Jujuy	23°31'S, 64°58'W	c. 1800	19 Jul 2000	2	On the valley of a creek with dense montane scrub and open montane forest.	H	IR
20	35-36	Molulo, Jujuy	23°34'S, 65°9'W	3000	Dec 1995	6; 12	Group of six, consisted of three pairs apparently nesting.	H	HP
21	37	Aguas Negras, PN Calilegua, Jujuy	23°42'S, 64°49'W	c. 800	6 Aug 2003	2	In flight over a steep wall on a river with pedemontane forest in the Yungas foothills.	H	AB and K. Cockle

Map	Record	Locality	Geographic coordinates	Elevation (masl)	Date	Number of individuals	Comments	Habitat	Observer
22	38	1 km N of Tumbaya, Jujuy	23°51'S, 65°29'W	2150	18 Nov 1997	1	Over humid Prepuna scrubland.	(D)	D. J. Stejskal and J. Rowlett
23	39	Abra de Manantiales, Volcán, Jujuy	23°54'S 65°28'W	2295	19 Mar 2006	24+	Humid scrub, flying over water courses.	H	FBG
24	40	Morro del Alisar, Lozano, Jujuy	24°04'S 65°27'W	1789	4 Aug 2007	18+,6+,15+	Adults feeding young birds, flying over the river.	H	FBG
25	41	Río Lozano, Jujuy	24°04'S, 65°25'W	1550	18 Aug 1993	20	Where the river crosses the Ruta Nacional 9, on somewhat degraded montane forest.	(H)	RC and D. Holman
26	42	La Ollada, Lozano, Jujuy	24°04'S 65°25'W	1976	6 Aug 2007	7,4+	Quebradas de Seveguillar.	H	FBG
27	43	Salto Alto, Quebrada de Lozano, Jujuy	24°04'S 65°28'W	3320	2 Aug 2008	2-5	On the waterfall.	H	FBG
28	44-45	Río Yala, Jujuy	24°07'S, 65°24'W	1500	12 nov 1995; 26 Mar 2003	20; c. 100	First group over the river; second group above the cerros in the quebrada de Yala.	H	RC and D. Finch; RC and M. Mosqueira
29	46	Guerrero, Jujuy	24°11'S, 65°27'W	1550	12 and 14 Jul 2003	20	Disturbed transitional scrub around the town.	(H)	GDP, L. Segura and H. Rodriguez Goñi
30	47	Loma del Antigal, Guerrero, Jujuy	24°13'S 65°30'W	2342	31 Jan 2008	6+	Montane prairie.	H	FBG
31	48	Vega del Tocomar, W of Abra de Chorrillos, Salta	24°11'S, 66°34'W	3500	18 Feb 1996	1	Flying over a bog (vega) grazed by lamas (<i>Lama guanicoe</i>).	D	RC
32	49	Cerro Alto Campanario, San Antonio, Jujuy	24°26'S 65°27'W	2375	10 Apr 2003	3-7	Flying over the "peña."	H	FBG
33	50	Quebrada Cuesta Grande, Salta	24°40'S 65°35'W	2120	19 Sep 2008	3	Flying over a river slope.	H	FBG

Map	Record	Locality	Geographic coordinates	Elevation (masl)	Date	Number of individuals	Comments	Habitat	Observer
34	51	Cerro Bola, Rosario de Lerma, Salta	24°50'S 65°44'W	2050	18 Sep 2008	1	Prepuna scrub with abundant cacti.	H	FBG
35	52,53	Cerro Malcante, PN Los Cardones, Salta	25°04'S 65°52'W	c. 4000 3500	16 Sep 1994 11 Nov 2003	3,8	Open Puna with rocky ground and sparse dry vegetation.	D	RC, HC
36	54,55	RP 33, Salta, Peña El Caracol, Cuesta del Obispo, Salta	25°10'S 65°50'W	2700 2900	12 Aug 2000 13 Aug 2003	4,2	Near San Martin, on a humid quebrada with <i>Cortaderia selloana</i> .	H	MP; AB, and K. Cockle
37	56-62	Cuesta del Obispo	25°11'S, 65°49'W;	2700 2500	24 Apr 2002(x2) 11 Dec 2006, Jan 2007-Jan 2008	10 (x2); 4 10	Flying over slopes with degraded humid montane shrubland and grassland. Generally in pairs or small groups. Together with blue-and-white swallows (<i>Pygocbelidon cyanoleuca</i>).	H	JMB, GDP, HC, and L. Cuenca (x2); IR and EJ
38	63-64	Paraje Agua del Godo, PN San Guillermo, San Juan	29°15'S, 69°21'W;	3200	2 Apr 1999 (x2);	2; 1 (x2)	Above the arroyo San Guillermo in Puna habitat.	D	AB
39	65	3 km N of PN San Guillermo, San Juan	29°13'S, 69°21'W	3200	3 Apr 1999	2,1	Puna habitat.	D	AB
40	66-68	Arroyo Leoncito, arroyo del Medio, and arroyo de Adentro, PN El Leoncito, San Juan	31°46'S, 69°21'W	2550; 3200	13, 17 and 19 Jan 1999	2; 1; 2	Southernmost records. The first locality was a narrow humid quebrada in the "nacientes" of the creek, with abundant <i>Larrea</i> sp., <i>C. selloana</i> , and <i>Juncus balticus</i> . The last locality is the highest one.	D	AB (x2); AB and E. Mérida

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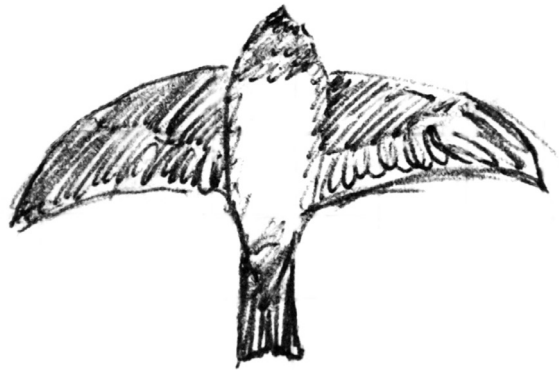
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