

THE STATUS OF HOODED GREBE (*PODICEPS GALLARDO*) IN CHILE

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Resumen. – El estatus del Pimpollo Tobiano (*Podiceps gallardoi*) en Chile. – La situación del Pimpollo – o Macá – Tobiano en Chile ha generado una gran incertidumbre desde que fuera mencionado por primera vez para este país hace 25 años. Desde entonces, han sido publicadas numerosas observaciones, pero estas no han sido analizadas de un modo integrado, por lo que se ha mencionado que la especie podría ser nidificante, visitante ocasional o incluso simplemente accidental en el extremo sur del país. En el presente trabajo se recopilan y analizan las observaciones publicadas e inéditas, interpretando el contexto ambiental y temporal en que fueron realizadas y el posible significado en relación a la distribución regional y al comportamiento de esta especie globalmente amenazada. El patrón de las observaciones existentes sugieren que existen dos áreas de ocurrencia diferentes del Pimpollo Tobiano, una donde la especie parece ser accidental en el sur, a ambos márgenes del estrecho de Magallanes, y otra al norte donde pareciera ser regular en temporada estival entre sectores del PN Torres del Paine y Puerto Natales. Si bien la evidencia actual sugiere que los números poblacionales en Chile no afectarían a la conservación global de la especie, es posible que los individuos observados en Chile en los alrededores del PN Torres del Paine y Puerto Natales sean individuos relacionados a las poblaciones de la meseta de las Vizcachas en Argentina, que se creían extintas.

Abstract. – The status of the Hooded Grebe in Chile has been uncertain since it was first mentioned for the country 25 years ago. Since the first observation, a new set of records has been published elsewhere, but none of them has comprehensively assessed the status of the species in Chile. These publications hypothesize that the species is either a breeding resident, an occasional visitor, or simply a vagrant in southern Chile. In the present article, I collate and discuss all published (and some unpublished) observations of this critically endangered species in Chile, focusing on the temporal distribution of observations and on habitat characteristics. The distribution of records suggests the existence of two different regions where the Hooded Grebe is observed in Chile. The southern area, at both sides of the Strait of Magellan, includes mainly records of putative vagrants during annual movements, while in the northern area, within Torres del Paine National Park and Puerto Natales, the species seems to be a regular summer resident. So far there are no confirmed breeding records for Chile. Although the present information suggests that the Chilean population is very small and not of great importance for the conservation of species, the northern population could represent the last individuals of the presumably extinct Las Vizcachas Plateau's population of Argentina.

Key words: Breeding, Chile, conservation, distribution, Hooded Grebe, *Podiceps gallardoi*.

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The Hooded Grebe (*Podiceps gallardoi*) was discovered in 1974, known only from Los Escarchados Lake, Santa Cruz Province, southwest

Argentina (Rumboll 1974). Shortly after its discovery the population size was estimated at no more than 140–150 adults, numbers based

only on the birds present at Los Escarchados and nearby lakes, such as Escondida and Blanquillo, all in Las Vizcachas Plateau, only few kilometers away from type locality (Erize 1983). Since the mid 1970s and during the next decade, extensive surveys were carried out, during which new breeding sites were identified in other plateaus of southwestern Santa Cruz, Argentina. Based on these surveys, the Hooded Grebe population was estimated at 3000–5000 adult individuals distributed on all the highland plateaus of western Santa Cruz, with its northern edge of its distribution in the Buenos Aires Lake Plateau, south of the Buenos Aires/Carreras Lake (Fjelds  1986, Beltr n *et al.* 1992, Llimona & del Hoyo 1992). As a consequence, in 1994 the Hooded Grebe was categorized as least concern/near threatened (Birdlife 2015), based on the assumption that population numbers were relatively high considering the occupied area and due to the absence of important threats in its remote habitat (Llimona & del Hoyo 1992, O'Donnel & Fjelds  1997). Since 2009, fieldwork has been conducted on western Santa Cruz Province and on the Atlantic Coast of the same province. During that period, substantial threats to the Hooded Grebe populations could be identified, mainly drought, food competition, and habitat modification by exotic fishes (mainly rainbow trout *Oncorhynchus mykiss*), depredation by the American mink (*Neovison vison*), and nest depredation by the Kelp Gull (*Larus dominicanus*). Presumably, these threats have led to a population decline of nearly 80% in just two decades, and the species is now considered 'critically endangered' (Birdlife International 2015), with a total population of about 800 adult individuals (Roesler *et al.* 2012).

Until the early 1990s the Hooded Grebe was considered endemic to Argentina. Since then, the species has been recorded from Chile, where it was classified as marginal or

accidental visitor (Fjelds  & Krabbe 1990, Llimona & del Hoyo 1992, Jaramillo 2003, Fjelds  2004) although its presence could be more regular than previously thought (Jaramillo 2003). It has also been postulated that grebes could overwinter in the Chilean fjords (Fjelds  1986), but this idea was discarded later following extensive surveys (Imberti *et al.* 2004, Imberti 2005). Given the current level of threat, the determination of the status of the Hooded Grebe in Chile, in particular whether there are viable breeding populations, could have conservation relevance. Here, I review its status in Chile based on published and unpublished observations.

METHODS

The present work is a revision and analysis of all published records and observation mentioned elsewhere (internet forums and databases). In cases where the published observations did not belong to the author of the article, the original observers were contacted and consulted whenever possible. Furthermore, I searched for unpublished observations online in birdwatching/ornithology forums, mostly on the website eBird (www.ebird.org, Cornell Lab of Ornithology). The locations mentioned were checked using Google Earth (Google Inc.) to assess the presence of suitable environments due to the ambiguity of the geographical coordinates (and locality descriptions) in some of the original articles.

RESULTS AND DISCUSSION

Sightings of the Hooded Grebe in Chile started in the late 1980s and early 1990s, with several records between 1989–1991 in Torres del Paine National Park (hereafter NP) and nearby lakes (Pearman 1995). Apparently, the species was considered occasional in that area, but without any confirmed record or observa-

tion (Fjelds  & Krabbe 1990). After these first mentions in the literature, the actual observations and some other unpublished sightings were compiled by different authors (Mazar Barnett & Pearman 2001, Mar n 2004, Mart nez Pi a & Gonzales Cifuentes 2005).

All known sightings of Hooded Grebes in Chile were published after 1990. The first concrete mention for Chile corresponds to a group of 20 Hooded Grebes observed by R. H. Charlwood on 12 November 1992 in the region between Punta Arenas and Puerto Natales (Mazar Barnett & Pearman 2001). Later, on 17 December 1993, J. M. Arcos Pros, E. Badosa, and D. Ventura observed and photographed four individuals in a lake near R o Verde River and Puesto Verano (Babarskas & Chebez 1999; coordinates of the lake, given by J. M. Arcos Pros [*in litt.*] 52 27'13"S, 71 25'32"O). Those photographs were never published, and it was never mentioned whether they were deposited in an official archive or not; J. M. Arcos Pros (*in litt.* 2015) provided photographs of the individual and the lake (Fig. 1). On 5 February 1997, a single Hooded Grebe was observed next to a group of 2200 Silvery Grebes (*Podiceps occipitalis*) at the Natural Monument Laguna de los Cisnes in Tierra del Fuego (St. Pierre & Davies 1998), and another individual on 26 October 1997 was photographed at Santa Mar a Lake in Tierra del Fuego by R. Matus (the first published record with evidence; Barros 2010). The location of this observation is mentioned as "Las Mercedes" Lake (Matus 1998, Mazar Barnett & Pearman 2001), but later R. Matus (*in litt.* 2015) corrected the name of the location to Santa Mar a Lake. The last published record of the 1990s is an observation of two individuals in Torres del Paine NP on 30 January 1998, without further details or evidence (O. G ller *in* Mazar Barnett & Pearman 2001). Unfortunately, I could not contact the observer to confirm this observation and obtain further details.

Among the unpublished observations are those made by P. Harrison (*in litt.* 2015), who refers to the sighting of Hooded Grebes during the 1990s in several small lakes near or within Torres del Paine NP area, and during the first decade of the 2000s repeatedly at a lake located west of national route number 9, to the south of the National Park. Considering the vague description of the site given by P. Harrison (*in litt.* 2015), this lake could be the same as the one where J. M. Arcos Pros, E. Badosa, and D. Ventura photographed one individual on 17 December 1993. All of Harrison's observations correspond to three or fewer individuals and took place between February and March.

After 15 years without any new (published) records, two individuals were observed on Inia Lake, north of Punta Arenas city, between 12 October 2013 and 4 January 2014 (Barros & Schmitt 2015). These records are also described (with photographs and further details) on eBird (<http://ebird.org/ebird/hotspot/L3438685>). The approximate date when the individuals left the lake is unclear as no observations for the site were reported in eBird after the last sighting on 4 January 2015. Finally, four other individuals were observed and photographed on Blanquillo Lake in Torres del Paine NP (<http://ebird.org/ebird/view/checklist?subID=S23115757>) and on Goic Lake inside the same National Park (<http://ebird.org/ebird/chile/view/checklist?subID=S22742906>). Further information on the latter observations has been presented by Donoso *et al.* (2015).

Two references mention Hooded Grebes breeding in Chile. The first known putative breeding record by R. H. Charlwood in 1992 was mentioned as "a small breeding colony" (see Fjelds  2004). However, upon being consulted, Charlwood disputed this interpretation stating that "we saw no courtships or anything that could lead to think that they were about to breed" (R. H. Charlwood *in litt.*

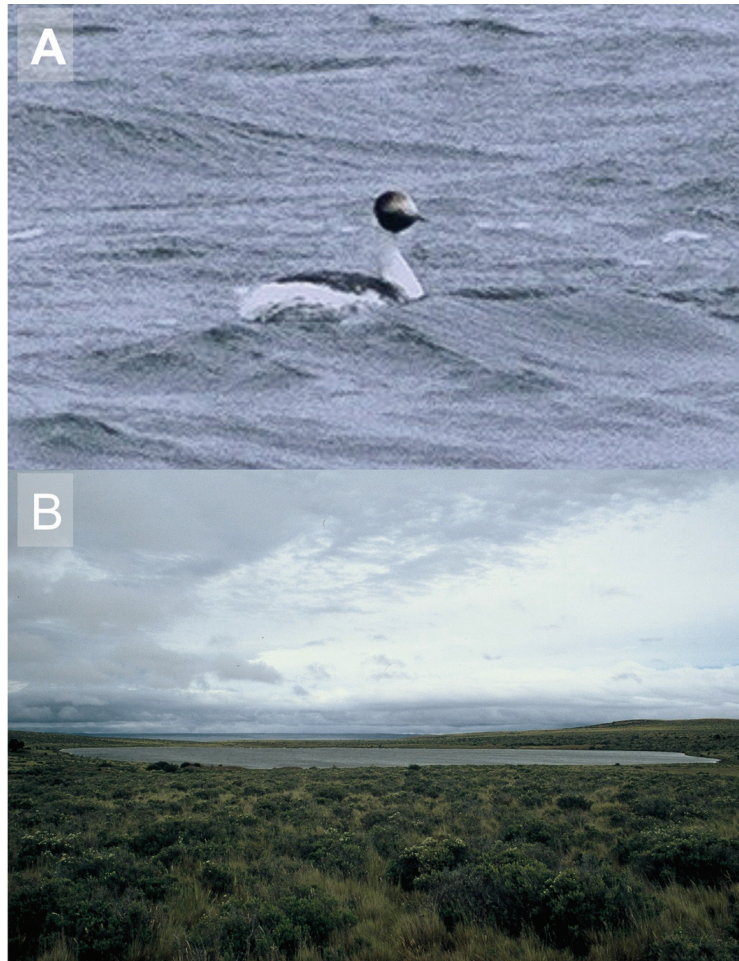


FIG. 1. First Hooded Grebe (*Podiceps gallardoi*) photographed in Chile (A) and the lake where the observation was made on 17 December 1993 (B) near Río Verde River and Puesto Verano. Photos by J. M. Arcos Pros.

2015). The second record mentioned that individuals were “possibly breeding” and was based on the observation of J. M. Arcos Pros *et al.* in 1993 (Babarskas & Chebez 1999), but this was denied later by the same observer, who stated that “we did not see any indication of breeding, just four birds swimming on the lake” (J. M. Arcos Pros *in litt.* 2015). The description of the water body as an “endorheic lake which suffered eutrophication” (see

Babarskas & Chebez 1999) makes breeding highly unlikely as this type of lake is not the preferred breeding habitat for the Hooded Grebe (Fjeldså 1986, Beltrán *et al.* 1992).

With the available, scarce data at hand, the recent status of the Hooded Grebe in Chile is difficult to determine considering that only seven independent observations have been published in the last 23 years. Jaramillo’s (2003) supposition that this species could be

more frequent than thought was reasonable enough based on the known distribution at that time. However, Jaramillo assumed that Hooded Grebe populations are distributed uniformly, and that stable populations inhabit the southernmost part of the distribution range in Argentina, the Las Vizcachas Plateau, which is not correct based on current knowledge (Roesler *et al.* 2012). Currently, this area provides only marginal habitat for the species (O'Donnell & Fjeldså 1997), and stable populations are almost inexistent at such latitudes (Roesler *et al.* 2012) except for an extremely small breeding group comprised by only five pairs on the nearby Mata Amarilla Plateau (Roesler *et al.* 2014). However, the recurrent records from the Torres del Paine NP area suggest the regular presence of the species in Chile, although the paucity of details makes assessing its status difficult.

The temporal distribution of the published observations is also hard to interpret, with no clear seasonal pattern. Observations are scattered over a large part of the year including spring, summer, and autumn, but no observations were made during winter (Fig. 2). It is also interesting that in all cases only few individuals were recorded (Fig. 2), except a single outstanding record of 20 individuals in November 1992, at a time when Hooded Grebes are returning from the winter grounds to the breeding lakes and searching for nesting sites (Imberti *et al.* 2004, Roesler unpubl. data). Again, unpublished information provided by P. Harrison (*in litt.* 2015) suggests more observations in late summer or early autumn, which could indicate post-breeding presence.

Chilean records are located in two well-separated sectors: southern records on both sides of the Strait of Magellan, and northern records in the areas near Puerto Natales and Torres del Paine NP (Fig. 3). Lakes in the northern portion of Magallanes Region, close to Torres del Paine NP, are at only 50 km

away from the western edge of Las Vizcachas Plateau and 100 km from Los Escarchados Lake. The observation of 20 individuals in 1992 is interesting since it fits with the population decrease in Las Vizcachas Plateau, which probably started in the mid 1980s. This population has all but disappeared with only two individuals recorded in the past decade (Roesler *et al.* 2014). The disappearance of the grebes on that plateau happened following the drying of lakes. By 1984, the population at Los Escarchados Lake had dropped to only 9 individuals from the 127 individuals recorded in 1978 (Johnson 1997). Many individuals could have dispersed to wetter areas, mainly to the west and/or southwest, including lakes in Torres del Paine NP. Additionally, the fact that the last observation of four individuals in the Torres del Paine NP region was made during the summer season of 2014–15 provides further evidence to consider the species being as a more regular inhabitant and even an occasional breeder in that region (for details see Donoso *et al.* 2015). Lakes like El Blanquillo and Goic, in Torres del Paine NP, are relatively similar in size, physico-chemical characteristics, altitude, and proximity to forests, to El Roble Lake (Perito Moreno National Park), central west portion of Santa Cruz province, Argentina, where individuals were recorded between 1992 and 1995 and nesting was confirmed in 1993 (P. Collavino & C. Sorati unpubl. data). These similarities suggest that suitable nesting conditions exist in Torres del Paine NP. Although the exact location of the lake, where the 20 individuals were sighted in 1992, is unknown, it is remarkable that the year is also concordant with the greatest gathering of individuals in Perito Moreno NP, possibly caused by drought in other parts of the distribution range (Beltrán *et al.* 1992).

As for the records from the southern part of Magallanes Region, it becomes evident that – although some individuals seem to stay in

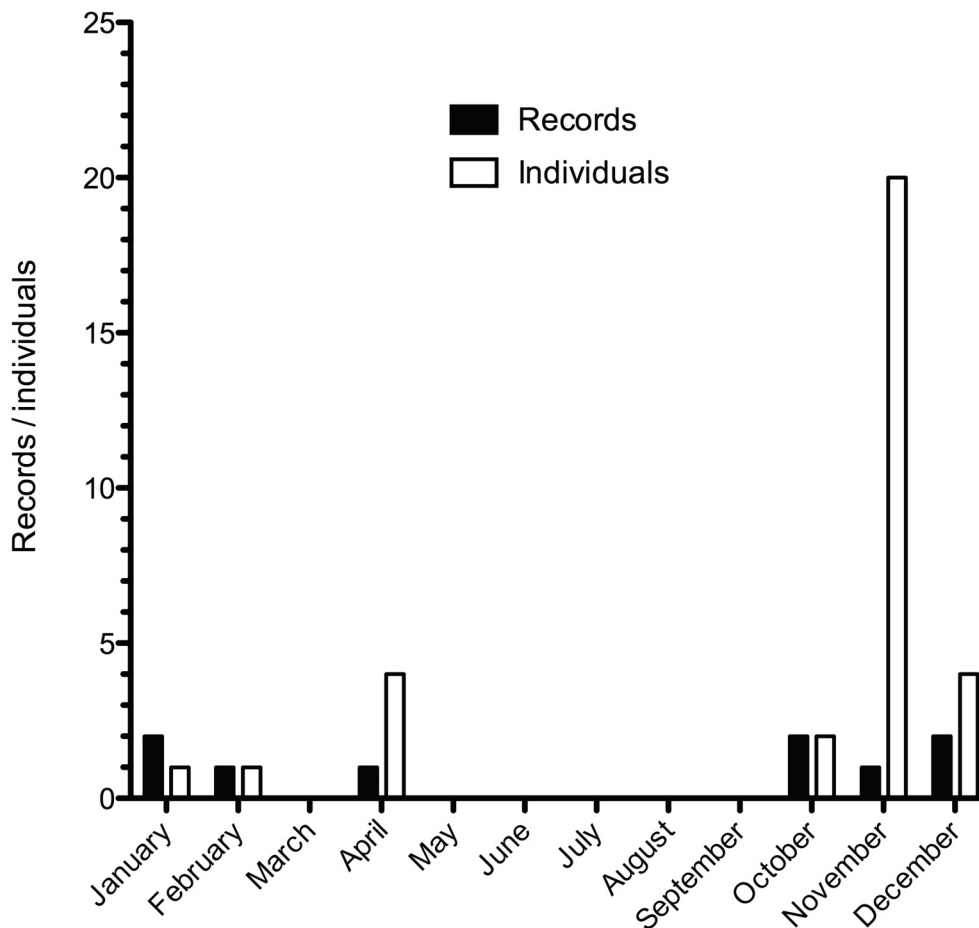


FIG. 2. Temporal distribution of the Hooded Grebe (*Podiceps gallardoi*) records and number of individuals recorded. White bars: number of individuals recorded per month; black bars: number of records per month.

the area until early January (see records from Inia Lake; Donoso *et al.* 2015) – all observations involved single individuals or pairs in the pre- or post-breeding periods. This suggests that they were probably vagrants or simply on stopover during migration to breeding or wintering areas. The lakes close to the Strait of Magellan are 170–190 km away from one of the most important wintering sites at Río Gallegos Estuary, Argentina (Imberti *et al.* 2004, Roesler *et al.* 2012). They are also

located southeast from the closest summer areas, the lakes on Vizcachas Plateau, Mata Amarilla Plateau and/or Torres del Paine NP. It is unlikely that the individual observed at Laguna de Los Cisnes (St. Pierre & Davies 1998) and the one at Santa María Lake (Matus 1998) were the same individual as mentioned by Mazar Barnett & Pearman (2001). Although this might be possible for geographic reasons – the sites are only c. 20 km away from each other – the records had a

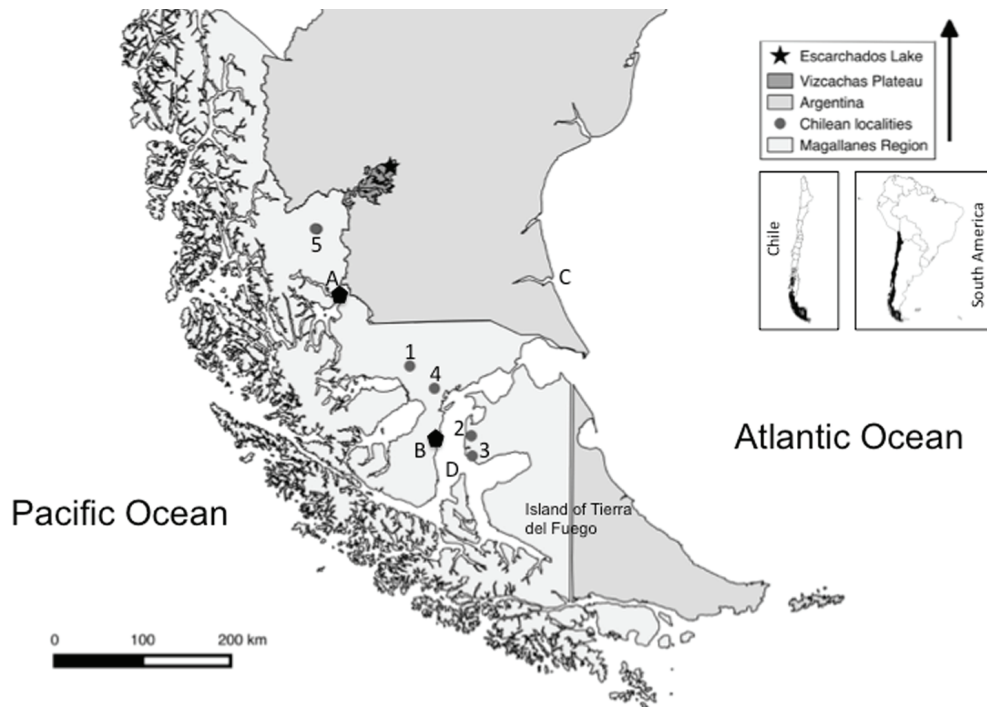


FIG. 3. Map depicting the known localities of Hooded Grebe (*Podiceps gallardoi*) in Chile. “Southern localities:” 1) lake Río Verde River and Puesto Verano; 2) Los Cisnes Lake, Tierra del Fuego Island; 3) Santa María Lake, Tierra del Fuego; 4) Inia Lake, north of Punta Arenas. “Northern localities:” 5) lakes of Torres del Paine NP area, including Goic, Blanquillo and the “unnamed” lakes of the same area mentioned by P. Harrison (*in litt.* 2015). Important sites: A) Puerto Natales City (Chile); B) Punta Arenas City (Chile); C) Río Gallegos Estuary (Argentina); D) Strait of Magellan (Chile).

time difference of nine months (post- and pre-breeding season). Thus, the records could likely represent a coincidence rather than the case of a single individual overwintering in the area.

In conclusion, the repeated records in Chile must be analyzed in two different ways, depending on the area. On the one hand, the Hooded Grebe seems to be an accidental visitor in the southern part of the country close to the Strait of Magellan, with some individuals appearing occasionally in very low numbers and perhaps only during migration to the Atlantic Coast. The possibility of Hooded Grebes wintering on the Strait of

Magellan is not entirely unlikely, although searches in the area so far have been unsuccessful (Roesler unpub. data). No other wintering areas are known besides the three main estuaries of the three big rivers of Santa Cruz, Gallegos, Coyle and Chico-Santa Cruz (Roesler *et al.* 2012). On the other hand, the northern sector in Chile may harbor a small population, which is subject to the same fluctuations that the species suffers across the entire distribution range on the western plateaus of Santa Cruz province, Argentina. The detection of extant and even new breeding colonies will require a more exhaustive monitoring of lakes in and near Torres del

Paine NP and on nearby areas between this National Park and Puerto Natales. Regular monitoring of Goic and Blanquillo lakes, and nearby lakes, seems to be the best option to assess the true situation of the species in that area.

The confirmation of a stable population in Chile would not be of extremely high importance for the global conservation of the Hooded Grebe since the core population inhabits, and breeds in, Argentina. Nevertheless, the confirmation of a breeding population in Chile, although being small, could be important for the conservation of genetic diversity in the species. Recent studies found that there are genetic differences among Hooded Grebes from different plateaus in Argentina (Roesler in prep.). The individuals recorded in the northern portion of the Magallanes Region in Chile could then represent the last surviving individuals of the former unique breeding population of Las Vizcachas Plateau. Therefore, they could be the last chance of recovering what was thought a lost population (Roesler *et al.* 2012, 2014) and the population where the species was discovered in 1974.

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