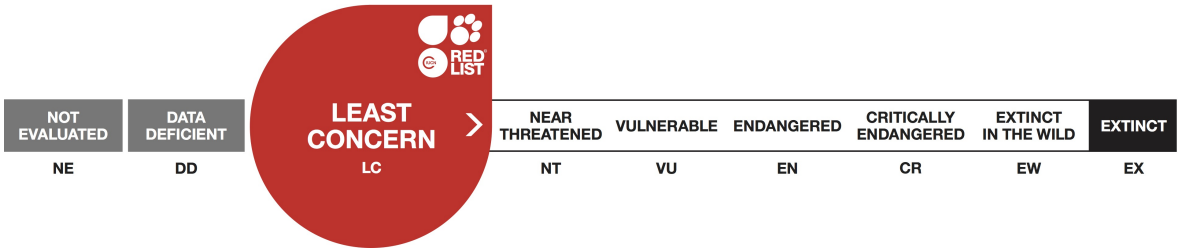
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Caiman crocodilus, Spectacled Caiman

Assessment by: Balaguera-Reina, S.A. & Velasco, A.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Reptilia	Crocodylia	Alligatoridae

Taxon Name: *Caiman crocodilus* (Linnaeus, 1758)

Synonym(s):

- *Caiman sclerops* Schneider, 1801
- *Lacerta crocodilus* Linnaeus, 1758

Common Name(s):

- English: Spectacled Caiman, Common Caiman, Lagarto blanco (Peru)
- Spanish: Baba (Venezuela), Babilla (Colombia), Guajipal (Nicaragua), Tulisio (Mexico)

Taxonomic Notes:

Caiman crocodilus has four subspecies currently recognized: *C. c. crocodilus*, *C. c. fuscus*, *C. c. chiapasius*, and *C. c. apaporiensis*. *Caiman yacare* previously was considered to be a fifth subspecies (i.e., *C. c. yacare*). However, it is now generally accepted as a full species (King and Burke 1989), and is no longer treated as a subspecies (Escobedo-Galván *et al*. 2011).

Busack and Pandya (2001), using morphological analysis, stated that there were no differences between subspecies. However, Venegas-Anaya *et al*. (2008), using mitochondrial DNA analysis, recognized three out of these four subspecies (no samples from *C. c. apaporiensis* used in this study) and delimited geographically distributions within the *C. crocodilus* complex. DNA analyses also suggest a geographic divergence in two groups: the Mesoamerican group including *C. c. fuscus* and *C. c. chiapasius* and the South American group, which includes *C. c. crocodilus* and *C. yacare* (Amato and Gatesby 1994; Venegas-Anaya *et al*. 2008).

Recent morphological analysis of the Apaporis River caiman (*C. c. apaporiensis*), based on holotype and paratypes skulls from the Chicago Field Museum (USA), corroborates a significant morphological differentiation with the rest of the *C. crocodilus* subspecies (Escobedo-Galván *et al*. 2015a) as reported by Frederico Medem in 1952. However, DNA analysis conducted with additional paratypes from Colombian collections showed that several of those skulls identified as *C. c. apaporiensis* in the Instituto de Ciencias Naturales, National University of Colombia collection fall into the *C. c. crocodilus* clade (Bloor 2013). Nevertheless, a more in-depth study is being initiated in late 2018, to collect less fragmented DNA (from live individuals rather than ancient bones) and larger sample sizes (for both morphological and genetic analyses), which will hopefully provide new evidence on the validity of this subspecies.

Assessment Information

Red List Category & Criteria: Least Concern ver 3.1

Year Published: 2019

Date Assessed: February 8, 2016

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Justification:

The Spectacled Caiman (*Caiman crocodilus*) is distributed across 16 countries and has been introduced in three countries. This species has demonstrated a high recovery rate after exploitation. Population numbers are estimated in the millions and widely distributed throughout the range, although locally depleted or extirpated in some localities.

Previously Published Red List Assessments

1996 – Lower Risk/least concern (LR/lc)
http://dx.doi.org/10.2305/IUCN.UK.1996.RLTS.T46584A11062106.en

1988 – Threatened (T)

1986 – Threatened (T)

Geographic Range

Range Description:

The Spectacled Caiman is one of the most widely distributed crocodilians of the New World, ranging from southern Mexico to Peru and Brazil across 16 countries (Brazil, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Peru, Suriname, Trinidad and Tobago, Venezuela) with introduced populations in Cuba, Puerto Rico, USA, and insular Colombia (San Andres and Gorgona Islands) (Velasco and Balaguera-Reina 2018). Presence in Belize and Bolivia are unconfirmed (M. Tellez and A. LLobet, pers. comm. 2017). It is also the most geographically variable species in the Americas, with four subspecies generally being recognized (Medem 1981; King and Burke 1989). *Caiman c. crocodilus*, the nominate form, is distributed throughout the Orinoco basin across the Colombian and Venezuelan llanos, as well as the Amazon basin from Ecuador through Peru, Colombia, Venezuela, Brazil, Guyana, Suriname and French Guiana. *Caiman c. fuscus* is distributed from Nicaragua southward through Costa Rica, Panama, Colombia (both Pacific and Caribbean coasts) as well as the inter-Andean valleys, western Venezuela and Ecuador (Medem 1981, 1983; Venegas-Anaya *et al*. 2008). In the case of *C. c. chiapasius*, Medem (1981, 1983) stated that this subspecies is distributed from Mexico to Pacific Colombia and possibly Ecuador. However, recent phylogenetic studies analysing mtDNA limit its range to the Pacific coast from Chiapas in Mexico to El Salvador (Venegas-Anaya *et al*. 2008). Finally, *C. c. apaporiensis*, the most conspicuous of all subspecies due to its narrower snout, is restricted to the middle Apaporis River basin of Colombia (specific locality: Inaná Lagoon; Medem 1955, 1981). On this matter, authors such as Ayarzagüena (1984), Gorzula (1994) and Ayarzagüena and Castroviejo (2008) state that a cline of narrow-snouted caimans may be present across Colombia and the Venezuelan llanos. To date, no morphometric studies addressing this hypothesis have been undertaken (Velasco and Balaguera-Reina 2018). Despite the information provided above no clear boundaries have been identified among subspecies or even between spectacled and yacare caimans (*Caiman yacare*).

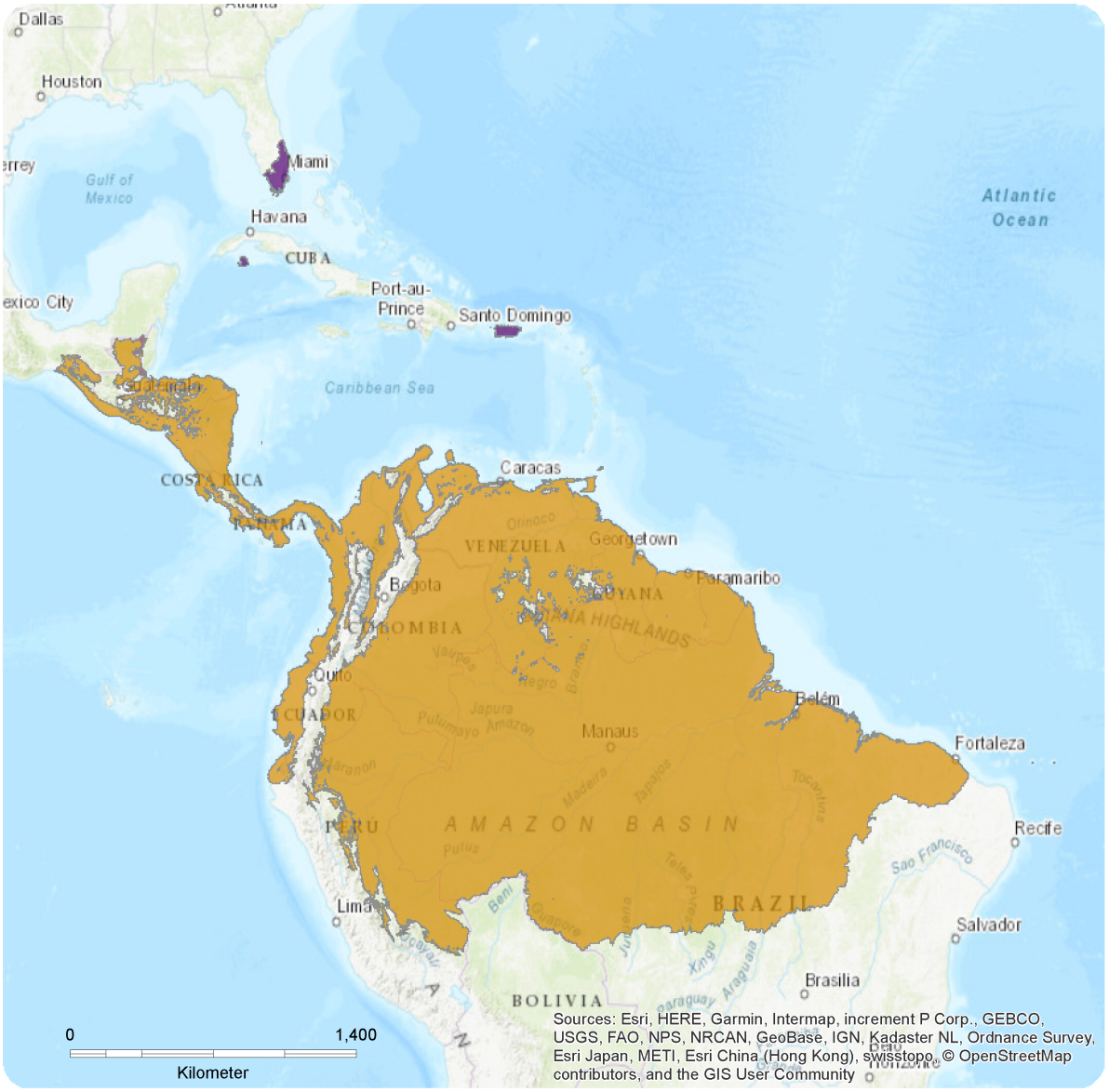
Country Occurrence:

Native: Brazil; Colombia; Costa Rica; Ecuador; El Salvador; French Guiana; Guatemala; Guyana; Honduras; Mexico; Nicaragua; Panama; Peru; Suriname; Trinidad and Tobago; Venezuela, Bolivarian Republic of

Introduced: Cuba; Puerto Rico; United States

Distribution Map

Caiman crocodilus



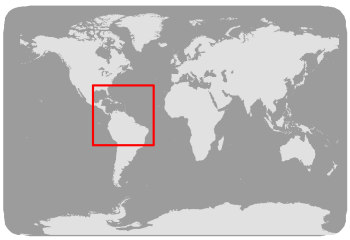
Range

- Extant & Introduced (resident)
- Extant (resident)
- Possibly Extant (resident)

Compiled by:

Balaguera-Reina S.A. and Velasco A. - CSG/IUCN





The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.

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Population

Caiman crocodilus occurs over an extremely wide range and remains numerous in many locations, and appears to have recovered despite decades of exploitation. Numbers are estimated to be in the millions and no overall global trend of decline is evident. Availability of survey data is adequate in Brazil, Costa Rica, Mexico and Venezuela. Other countries within the species' range have insufficient data to define local conservation status. Over the last several years, various populations across the species' range have been evaluated.

Brazil: Spectacled Caiman populations, especially in the Amazon area, have been evaluated in several studies which indicate wild populations are stable or continuing to increase (Marioni *et al*. 2008, Da Silveira *et al*. 2008, Vasconcelos *et al*. 2006, Da Silveira *et al*. 1997, Rebelo and Lugli 2001). Campos *et al*. (2008) demonstrated that size distributions of breeding females in the Central Amazon vary greatly between populations and legal-size limits will be more effective if based on data from local populations. A captive breeding program is in place for *C. c. crocodilus* (Coutinho and Luz 2008).

Colombia: Surveys of *C. c. fuscus* in Cispata Bay (Ulloa and Cavanzo 2003, Cavanzo 2004) and Via Parque Isla de Salamanca (Balaguera-Reina and Gonzalez-Maya 2009) report population size structure is dominated by hatchlings and juveniles, and that densities are lower than those reported previously by Rodriguez (2000). Moreno-Arias *et al*. (2013) assessed the population ecology of *C. c. fuscus* in 10 localities in the Magdalena River valley (Cundinamarca Department) when a conservation-management plan for the species was being developed, and reported abundant individuals in lentic water bodies. Viloria-Lagares *et al*. (2016) studied the population ecology of *C. c. fuscus* in the Manso and Tigre Rivers, Paramillo National Natural Park, where a small population in these rivers existed in sympatry with *C. acutus*. The distribution and status of *C. c. apaporiensis* is still unknown, and its evaluation through surveys and habitat characterization remains a high priority. Bloor (2013) and Escobedo-Galván *et al*. (2015a) did genetic and morphological assessments (see the Taxonomic Notes section) and re-ignited discussion regarding the taxonomic validity of this subspecies. However, the lack of samples and data from the field keeps this discussion unresolved.

Costa Rica: The population status of the Spectacled Caiman has been reported as good for many years, with high abundance and increasing in the Caribbean region, specifically Caño Negro Wildlife Refuge (Allsteadt and Vaughan 1992b, Cabrera *et al*. 2003, Escobedo-Galván 2008, Escobedo-Galván and González-Maya 2008). On the other hand, some studies conducted in the Sierpe-Terraba wetlands in the Pacific region (Bolaños *et al.* 1997, Escobedo-Galván and González-Maya 2006) have shown a general population reduction in some areas due mainly to illegal consumption of meat and an illegal domestic market. Beginning in 2017, researchers began a survey in the Matina, Pacuare and Parismina-Reventazón Rivers in the Central Caribbean region to determine the current population status of the species in those areas (J. Bolaños and J. Sánchez, pers. comm. 2017).

Cuba: The Spectacled Caiman was introduced in Cienega de Lanier (Isla de la Juventud) in 1959, which increased by the 1990s to a population between 25,000 and 40,000 individuals (Rodriguez-Soberón *et al*. 1996). Mendez and Berovides (2015) evaluated the potential for a ranching program for the species in this area. To date, no studies have been carried out to evaluate the interaction between Spectacled caimans, American Crocodiles (*C. acutus*) and Cuban Crocodiles (*C. rhombifer*) on the island. Anecdotal records suggest Spectacled Caimans are predated by crocodiles. Information about this species in Cuba

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are available in the book of Los Crocodylia de Cuba (Alonso-Tabet *et al*. 2014).

Ecuador: Spectacled Caiman populations remain poorly studied. Ron (1995), Vallejo (1995) and Ron *et al*. (1998) assessed the population ecology, habitat use and growth rates of *C. crocodilus* and *Melanosuchus niger* in six lagoons of the Equatorial Amazon as well as the effect of mark-recapture studies on wariness. However, detailed information on caiman population status for the country is not available.

El Salvador: The latest information available was produced by Escobedo-Galván *et al*. (2004), Martínez (2005) and Martínez and Dueñas (2007), describing small or depleted *C. crocodilus* populations across the country. Defining current status are a high priority as well as to clarify which subspecies inhabit El Salvador. A group of researchers have commenced surveys in the Gulf of Fonseca to determine the current population status of the species in this area (A. Escobedo-Galván, pers. comm. 2017).

French Guiana: Detailed information on the status of caiman populations is not currently available.

Guatemala: No studies have taken place over the last three decades regarding the status of wild populations or the exact distribution of the species. Up-to-date studies in the country remain a high priority to define conservation status.

Guyana: No information regarding caimans has been published or reported in over 30 years. A population study was initiated at the end of 2017. The population is currently considered by authorities to be stable and abundant. No other research is currently being pursued. Accordingly, up-to-date surveys in the country remain a high priority for defining conservation status.

Honduras: In 1989 Honduras was the first country in Central America to be included in a regional crocodile study sponsored by CITES (King *et al*. 1990). The main objective was to provide information to develop a regional conservation program for crocodilians (*C. acutus* and *C. crocodilus*). The study provided a detailed assessment of the status and distribution of crocodilians in Honduras. They reported abundant populations in La Mosquitia region, estimating a *C. crocodilus* population of 3109 individuals (Cerrato 1991). No recent information on caiman population status in Hondurus is available.

Mexico: *Caiman c. chiapasius* is thought to be restricted to Chiapas State (Escobedo-Galván *et al*. 2015b). The first studies of the species' ecology in this area were done by Flores (2002, 2005) and Aguilar-Galindo (2005), who reported stable and healthy populations. In the last decade, studies concerning morphology (Macip-Ríos *et al*. 2012), nest predation (Vergara-García *et al*. 2016), nesting ecology (González-Desales *et al*. 2016), trophic ecology (Soria-Ortíz 2016), ectoparasites (Charruau *et al*. 2016) and demographics (Barrios-Quiroz *et al*. 2017) have been carried out, increasing the knowledge on the biology of this subspecies.

Nicaragua: Nicaragua is one of the few Central American countries where extensive population surveys on crocodilians have been conducted, providing data for assessing population fluctuations (Buitrago 2001). The abundance of *C. crocodilus* for this country was reported to have decreased at an annual rate of 9.6% due mainly to overhunting (over 44,000 skins harvested annually). Given this rate of decline, hunting was considered unsustainable. Currently, there is no research or any updated assessment of *C. crocodilus status* besides a research note describing habitat specific size distribution partitioning

(Haghighi and Tellez 2017).

Suriname: Knowledge regarding Spectacled caimans is outdated and derived mainly from the work of Ouboter and Nanhoe (1987, 1988) in the north of the country. These authors assessed the nesting and population ecology of the species, defining May-July as the nesting months. Hatchlings and second-year juveniles stay together for up to 18 months. Even though hunters had killed between 1500 and 2000 individuals in the Coesewijne River during the dry seasons of 1978 and 1979, the authors estimated a high population density in the area compared with other river populations, estimating a population size of 4700 individuals in 1983. Detailed information on the current caiman population status in Suriname is not available.

Panama: There are no recent studies regarding the status and distribution of wild populations. Panamanian authorities are currently preparing the first national census of *C. crocodilus* and *C. acutus* to define, for the first time, the conservation status of the species (M. Venegas-Anaya, pers. comm. 2017). The Panamanian Government, in collaboration with the Smithsonian Institute and Texas Tech University are designing the Panama Canal Management Plan for Conservation and Sustainable Use of *C. acutus* and *C. crocodilus*.

Peru: Current work regarding Spectacled Caimans is scarce. Laverty and Dobson (2013) assessed the dietary overlap between Black caimans and Spectacled caimans in the Peruvian Amazon, finding intense competition for food resources between these two species. The Peruvian Government is currently conducting an assessment of the population status of all crocodilians in the country (Vázquez *et al*. 2017). Some of the areas where the study is taking place are Pacaya Samiria National Reserve, Alto Nanay Regional Conservation Area, and the Amazon River (Loreto Department).

Puerto Rico: The Spectacled caiman was introduced in Puerto Rico in the 1960s, primarily through the legal caiman pet trade at that time. The principal population is located at Tortuguero Lagoon (Rivero 1998). Recently, Bontemps *et al*. (2016) evaluated the trophic ecology of the Spectacled caiman in this area and its potential impact as a non-native predator, providing novel information relevant to the design of management strategies.

Trinidad and Tobago: Medem (1983) provided information on the population status of the Spectacled Caiman. However, no recent information on caiman populations is available.

United States of America: An established feral population occurs in the vicinity of Homestead, Florida, where successful reproduction has occurred for many years. Additionally, reports of individuals (presumably released pets) in the wild are reported from Arizona (Somma and Fuller 2018), California (Somma and Fuller 2018), Connecticut (Altimari 1996), Iowa (Christiansen 2001), Indiana (Seng and White 2003), Kansas (Pearce 2012), Maryland (Roylance 2010), Massachusetts (Cardoza *et al*. 1993), Minnesota (Minnesota Department of Natural Resources 2005), Missouri (Somma and Fuller 2018), New York (Stewart 2001), Oklahoma (Webb 1970), Pennsylvania (Santoni 2011), Virginia (Ernst *et al*. 1997) and Washington (Roesler 2003). These records are considered to under-represent the number of *C. crocodilus* across the USA (Somma and Fuller 2018).

Current Population Trend: Stable

Habitat and Ecology (see Appendix for additional information)

The Spectacled Caiman is a medium-sized crocodilian (maximum total length in males 2.7 m; Ayarzagüena 1984), that is extremely adaptable in terms of habitat requirements, occupying rivers, creeks (caños), lagoons, lakes, borrow pits, swamps, wetlands, dams, and marshes (Medem 1981). Female Spectacled Caimans reach sexual maturity at about 1.2 m total length and lay an average of 28-32 eggs in a mound nest, usually during the annual wet season (Thorbjarnarson 1994; Velasco *et al.* 1996). A close relationship between precipitation in certain months and the proportion of females that reproduce in that year has been reported (Ayarzagüena and Castroviejo 2008).

Ayarzagüena and Castroviejo (2008) summarize the species' ecology and behavior in detail. They comment that the genus *Caiman*, along with *Alligator*, shows the most elaborate behaviors known in crocodilians. Spectacled caiman behavior includes complex sound signals: "warning calls" emitted by female to the young; "distress call" emitted by juveniles; and, "group cohesion calls" emitted by all individuals. Males display social behaviours: "vertical tail" and "arch tail" with sub-audible vibrations, barks, and visual displays. Another important characteristic described by these authors is that hatchling and juvenile groups remain together under female care for 12-18 months.

Initial studies on Spectacled caiman ecology were conducted in both the Venezuelan llanos and Colombian Caribbean (e.g., Chirivi 1973; Staton and Dixon 1975; Medem 1981; Seijas 1984, 1986). Subsequent studies report on life history traits such as feeding habits (Thorbjarnarson 1993, Allsteadt and Vaughan 1994, Da Silveira and Magnusson 1999, Bontemps *et al*. 2016), nesting ecology (Chirivi 1971, Staton and Dixon 1977, Thorbjarnarson 1994, Escobedo-Galván 2006, González-Desales *et al*. 2016), morphology (Busack and Pandya 2001, Macip-Ríos *et al*. 2012, Okamoto *et al*. 2015), parasites (Magnusson 1985, Charruau *et al*. 2016), injuries (Magnusson 1985, Seijas *et al*. 2003), growth (Magnusson and Sanaiotii 1995, Pérez 2001), and some demographic parameters (e.g., Allsteadt and Vaughan 1992a; Bolaños *et al*. 1997; Cerrato 1991; Flores 2005; Escobedo-Galván and González-Maya 2006, 2008; Martinez-Ibarra *et al*. 1997; Ouboter and Nanhoe 1987, 1988; Pacheco 1990; Ron *et al*. 1998; Perez 2001; Balaguera-Reina *et al*. 2010; Balaguera-Reina 2012; Moreno-Arias *et al*. 2013; Barão-Nóbrega *et al*. 2018).

The Spectacled Caiman appears to have been resilient to commercial hunting for several reasons, particularly the small size and young age at which reproduction commences and hunting focus on large adult males. Additionally, Spectacled Caimans lay eggs on almost any type of substrate, and this lack of selectivity is advantageous over other more selective sympatric species (e.g., *C. acutus*, *C. intermedius*). The near extirpation of larger, sympatric crocodilian species of greater commercial value, may have assisted Spectacled caimans. In Brazilian Amazonia, they occupy habitats formerly dominated by *Melanosuchus niger* (Magnusson 1982). In the llanos of Venezuela and Colombia, the proliferation of man-made water bodies (e.g., borrow pits) has increased the carrying capacity for caiman populations. The ecological adaptability of the Spectacled caiman is evidenced through its rapid population growth where it has been introduced, both accidentally and deliberately. Introduced (feral) populations are established in the United States (especially Florida), Puerto Rico (Watlington 2002), Cuba (under harvest since 1995, Berovides *et al*. 2000) and Colombia (San Andres and Gorgona Island; Forero *et al*. 2006, Velasco and Balaguera-Reina 2018).

Systems: Terrestrial, Freshwater

Use and Trade

Sustainable use of Spectacled Caimans has been implicated in conservation programs in many countries (Thorjarnarson 1999). A high volume of caiman skins enters international trade each year, primarily *Caiman c. fuscus* and *C. c. crocodilus*, and represents the majority of crocodilian skins traded globally (Velasco 2008, Caldwell 2017). Currently, the market of non-classic skins (*C. c. fuscus* and *C. c. crocodilus*) has dropped considerably, reducing the number of caiman skins exported from South America (Caldwell 2017).

Colombia is currently the largest producer of *C. c. fuscus* skins, exporting over 6 million between 1996 and 2015 (Caldwell 2017). Farms are nominally based on closed-cycle captive breeding but illegal ranching and wild harvest have been common in the past (Webb and Jenkins 2016). However, this program is now under revision and Colombian authorities are also developing a ranching program that brings conservation and economic benefits to the species and local communities. This initiative has improved the control of illegal harvesting, and resulted in a >70% reduction in skins exported in the last three years (2015-2017) (A. Velasco, pers. comm. 2017).

In Guatemala the species was used in two breeding farms, although these are no longer in operation (C. Mansilla, pers. comm. 2017). A captive breeding project in the San Julian Farm operated by San Carlos University is also no longer operational.

Guyana is currently considering exporting caiman meat and other parts, in addition to its existing live animal and skin exports.

Finally, since 1983, Venezuela has operated the largest wild harvest program for any species of crocodilian, based on controlled hunting by private landowners. The system allows private landowners to harvest up to 20% of caiman above 1.8 m total length each year, effectively restricting the harvest to adult males. Quotas were initially established based on census data from each property, provided by licensed surveyors engaged by the property owners. Annual exports average 50,000-60,000 skins. The program also includes a rigorous system of licensing of producers and processors, centralized inspection and storage of skins, and careful monitoring of tanneries and exports. Annual evaluations of the program and independent surveys in 1991-1992 suggested overexploitation in some areas (Velasco and Ayarzagüena 1995). In 1994, a new method of assigning harvest quotas was established, and the annual export quota was set at 70,000 skins. Currently, quotas are assigned based on regional surveys, ecological region, and the size of the property, and harvests; they are also restricted to 15% of Class IV (>1.8 m total length) individuals (Velasco *et al*. 1996). The quotas generated are compared with the regional average values derived independently by the CITES Management Authority, and adjustments to the estimated population and harvest quota are calculated (De Sola and Velasco 1994). The program offers an unparalleled opportunity to establish experimental harvesting regimes in conjunction with population studies. In 1996 Venezuela imposed a total ban on caiman harvesting to allow for a detailed analysis of the effect on wild populations (Quero and Velasco 1995). Harvest re-opened in 1997 based on the results of the extensive re-evaluation of the wild populations. An evaluation of harvest-effect identified which caiman populations would be harvested (Velasco *et al*. 2003). Caiman populations under wild harvest were continually evaluated (Velasco *et al*. 1997, Colomine *et al*. 2000, Villarroel *et al*. 2002), with a generally healthy status reported (Velasco *et al*. 2003).

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Threats (see Appendix for additional information)

The species has been subject to exploitation for local food and for commercial purposes, primarily leather but also salted and dried meat, for national and international commerce. The large volume of trade in the 1970s and 1980s led to concerns about conservation status, with some local decline was noted. The wide distribution, general habitat requirements and very large area of habitat, as well as the robust reproductive ecology of the species, all contribute to the resilience of the species to exploitation. Rapid population recovery after harvest controls were introduced has been reported. The effective implementation of CITES and national controls in both producer and processing/importing countries appear to have put the exploitation of *C. crocodilus* on a sustainable basis. The species is resilient and adaptable and impacts of deforestation, wetland loss and water pollution have not been shown to cause declines at the regional or global level, although some local impacts are expected.

Conservation Actions

Several conservation programs have been initiated with the participation of communities, private enterprises and environmental authorities. From 2004 to 2006, a pilot program was developed in Colombia for harvesting, egg incubation and breeding of caimans by fishing communities. The hatched individuals were raised for a year and released in different swamps of the Canal del Dique (Bolivar Department), in the same areas where the eggs were originally harvested (Fundación Biodiversa 2004). Based on the successful experiences of the Canal del Dique program, a larger program was implemented in the Atlántico Department between 2005 and 2009, involving the reintroduction of over 15,000 yearling and sub-adult individuals, which comprised the repopulation quotas of the closed-cycle breeding farms, into the wetlands where the species had been almost totally removed (Palencia *et al*. 2006, Rojano and Velasco 2006, Rueda *et al*. 2007, Medrano and Rojano 2009). Currently, studies are in place around the country to assess potential pilot areas for ranching under standardized conditions that allow local people to use caimans without affecting the conservation status of the species.

Conservation priorities for the species have been defined by Velasco and Balaguera-Reina (2018) and can be consulted in the IUCN SSC Crocodile Specialist Group Action Plan for *Caiman crocodilus*. Population surveys in Guyana and Nicaragua are considered high priority due to harvest of wild *C. crocodilus* in these countries being harvested based on annual quotas. No information regarding the conservation status of the species has been collected in the last few decades. Increased research into the ecology, population dynamics, conservation, and population genetics in areas under commercial use regimes (e.g., wild harvesting, captive breeding, ranching) will help define the sustainability of use programs and populations over time. Population surveys are also required in Ecuador, El Salvador, French Guiana, Guatemala, Honduras, Panama, Peru, Suriname, Trinidad and Tobago to determine the conservation status of the species as well as identify and mitigate potential issues with local use. Population surveys in areas where the species has been introduced and is considered 'established' (Cuba, insular Columbia (San Andres and Gorgona Islands), and Puerto Rico), are needed to assess the impact of this non-indigenous species on local fauna. Sustainable use programs might be an option for controlling introduced Spectacled caiman populations.

Credits

Assessor(s): Balaguera-Reina, S.A. & Velasco, A.

Reviewer(s): Isberg, S., Lippai, C. & Webb, G.J.W.

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External Resources

For Images and External Links to Additional Information, please see the Red List website.

Appendix

Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland	-	Suitable	-
1. Forest -> 1.7. Forest - Subtropical/Tropical Mangrove Vegetation Above High Tide Level	-	Suitable	-
1. Forest -> 1.8. Forest - Subtropical/Tropical Swamp	-	Suitable	-
2. Savanna -> 2.1. Savanna - Dry	-	Suitable	-
2. Savanna -> 2.2. Savanna - Moist	-	Suitable	-
3. Shrubland -> 3.6. Shrubland - Subtropical/Tropical Moist	-	Suitable	-
4. Grassland -> 4.6. Grassland - Subtropical/Tropical Seasonally Wet/Flooded	-	Suitable	-
5. Wetlands (inland) -> 5.1. Wetlands (inland) - Permanent Rivers/Streams/Creeks (includes waterfalls)	-	Suitable	-
5. Wetlands (inland) -> 5.2. Wetlands (inland) - Seasonal/Intermittent/Irregular Rivers/Streams/Creeks	-	Suitable	-
5. Wetlands (inland) -> 5.3. Wetlands (inland) - Shrub Dominated Wetlands	-	Suitable	-
5. Wetlands (inland) -> 5.4. Wetlands (inland) - Bogs, Marshes, Swamps, Fens, Peatlands	-	Suitable	-
5. Wetlands (inland) -> 5.5. Wetlands (inland) - Permanent Freshwater Lakes (over 8ha)	-	Suitable	-
5. Wetlands (inland) -> 5.6. Wetlands (inland) - Seasonal/Intermittent Freshwater Lakes (over 8ha)	-	Suitable	-
5. Wetlands (inland) -> 5.7. Wetlands (inland) - Permanent Freshwater Marshes/Pools (under 8ha)	-	Suitable	-
15. Artificial/Aquatic & Marine -> 15.1. Artificial/Aquatic - Water Storage Areas (over 8ha)	-	Suitable	-
15. Artificial/Aquatic & Marine -> 15.2. Artificial/Aquatic - Ponds (below 8ha)	-	Suitable	-
15. Artificial/Aquatic & Marine -> 15.8. Artificial/Aquatic - Seasonally Flooded Agricultural Land	-	Suitable	-
15. Artificial/Aquatic & Marine -> 15.9. Artificial/Aquatic - Canals and Drainage Channels, Ditches	-	Suitable	-

Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Threat	Timing	Scope	Severity	Impact Score
5. Biological resource use -> 5.4. Fishing & harvesting aquatic resources -> 5.4.2. Intentional use: (large scale) [harvest]	Ongoing	Minority (50%)	Negligible declines	Low impact: 4
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
7. Natural system modifications -> 7.3. Other ecosystem modifications	Ongoing	Unknown	Negligible declines	Unknown
	Stresses:	1. Ecosystem stresses -> 1.1. Ecosystem conversion 1. Ecosystem stresses -> 1.2. Ecosystem degradation		

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km²): 1987.91
Continuing decline in area of occupancy (AOO): Unknown
Extreme fluctuations in area of occupancy (AOO): Unknown
Estimated extent of occurrence (EOO) (km²): 9633092.39
Continuing decline in extent of occurrence (EOO): Unknown
Extreme fluctuations in extent of occurrence (EOO): Unknown
Lower elevation limit (m): 0
Upper elevation limit (m): 1000
Population
Number of mature individuals: 1000000
Continuing decline of mature individuals: No
Extreme fluctuations: No
Population severely fragmented: No
Continuing decline in subpopulations: No
Extreme fluctuations in subpopulations: No
All individuals in one subpopulation: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: No
Generation Length (years): 15
Movement patterns: Not a Migrant

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