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Cover Photograph: *Stenella clymene* (Clymene Dolphin) 7.5 km WSW of Soufriere, Dominica (Lesser Antilles) on 1 March 2018. Photograph © David Ascanio.

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Rescue, Veterinary Care, and Necropsy of a Stranded Clymene Dolphin (*Stenella clymene*) from the Caribbean Coast of Colombia

Antonio A. Mignucci-Giannoni[1,2,*], Ana M. Aguirre-González[3], Susana J. Caballero-Gaitán[4], Lesly J. Cabrias-Contreras[1], John A. Cabrera-Pallares[5], Michelle M. Dennis[2,6], Rafael H. Espinoza-Forero[7], Yenyfer Moná-Sanabria[3], Nicolas Restrepo-Garzón[4,5], Sandra M. Reyes-Ricardo[5], Carla I. Rivera-Pérez[1,2], Roberto Sanchez-Okrucky[8], Dalila Caicedo-Herrera[3], and Fernando Trujillo-González[3]

Abstract - *Stenella clymene* (Clymene Dolphin) is an oceanic endemic species of the Atlantic Ocean, well-documented in the Gulf of Mexico, but mostly unknown from the Caribbean. Here we report on the stranding, rescue, veterinary care, necropsy, and genetic species confirmation of 2 Clymene Dolphins from the Caribbean coast of Colombia in 2018 and 2020. Rescue and veterinary care protocols for oceanic cetacean species are uncommon, and were adapted from known dolphin species under human care. Upon the demise of 1 of the dolphins, complete post-mortem analysis of gross internal findings, histopathology, and genetics yielded important information to understand the specific stranding event, which will be useful in future offshore dolphin stranding events to improve emergency care and treatment and ultimately the conservation of the endemic species. The 2 Clymene Dolphin stranding events constitute the eleventh and twelfth known strandings of the species for the Caribbean and the first and second records for Colombia.

Stenella clymene Gray (Clymene Dolphin), a natural hybrid speciation of *Stenella longirostris* (Gray) (Spinner Dolphin) x *Stenella coeruleoalba* (Meyen) (Striped Dolphin) (Amaral et al. 2014, Kessler 2019), is an oceanic endemic of the tropical and subtropical Atlantic Ocean (Jefferson and Curry 2003, Perrin and Mead 1994, Perrin et al. 1981). This dolphin species is distributed from the US to Uruguay in the western North Atlantic, and from Spain to Angola in the eastern North Atlantic (Fertl et al. 2003, Pis-Millán et al. 2019, Robineau et al. 1994, Simões Lopes et al.

[1]Caribbean Manatee Conservation Center, Inter American University of Puerto Rico, 500 Carretera Dr. John Will Harris, Bayamón, Puerto Rico 00957, USA. [2]Center for Conservation Medicine and Ecosystem Health, Ross University School of Veterinary Medicine, PO Box 334, Basseterre, St. Kitts. [3]Fundación Omacha, Calle 84 #21-64, Barrio El Polo, Bogotá, Colombia. [4]Laboratorio de Ecología Molecular de Vertebrados Acuáticos (LEMVA), Departamento de Ciencias Biológicas, Universidad de los Andes, Carrera 1 No 18A–10, Bogotá, Colombia. [5]Corporación Autónoma Regional de Sucre (CARSUCRE), Carrera 25 #25-101, Avenida Okala, Sincelejo, Sucre, Colombia. [6]Biomedical Sciences, College of Veterinary Medicine, University of Tennessee, Knoxville, TN 37996, USA. [7]Corporación Autónoma Regional de los Valles del Sinú y del San Jorge (CVS), Carrera 6 #61-25, Barrio Los Bongos, Montería, Cordoba, Colombia, [8]The Dolphin Company, Banco Chinchorro 87, 13, 77504, Cancún, Quintana Roo, Mexico. [*]Corresponding author - mignucci@manatipr.org.

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1992, Weir et al. 2014). While the Clymene Dolphin is well documented in the Gulf of Mexico (Fertl et al. 2003, Jefferson 1996, Mullin et al. 1994), little is known of its distribution in the Caribbean (Fertl et al. 2003).

As part of the collaborative efforts to deal with aquatic mammal stranding events in Colombia (Rosso-Londoño et al. 2017), dolphins, whales, and manatees were rescued if found alive or salvaged if found dead, and alpha-level information obtained to document the case. We opportunistically gathered more-detailed data and implemented rescue, veterinary care, or necropsy protocols following Geraci and Lounsbury (2005), Slaoui and Fiette (2011), Rosso-Londoño et al. (2017), and Gulland et al. (2018).

Here we report on the live stranding, rescue, veterinary care, necropsy, and genetic species confirmation of a Clymene Dolphin from the Caribbean coast of Colombia. Additionally, we present a second record of a Clymene Dolphin recently stranded dead in the same area of Colombia.

On 11 December 2018, local fishermen of the Gulf of Morrosquillo in the Department of Sucre, Colombia, sighted a lone dolphin approaching the shore near Playas de Guerrero in the city of Santiago del Tolú (9°33'19"N, 75°34'33"W) (Fig. 1). Efforts to return it to deeper water were unsuccessful as the dolphin was

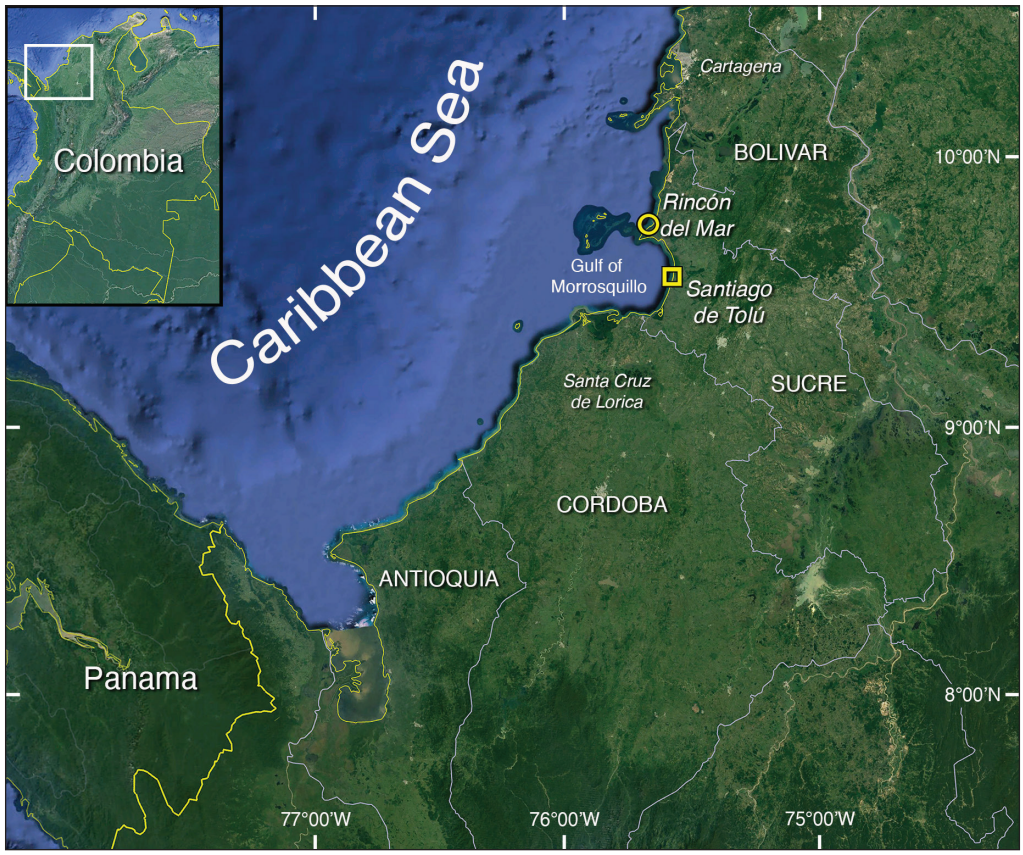

Figure 1. Location of the first (11 December 2018; yellow square) and second (20 July 2020; yellow circle) Colombian records of Clymene Dolphin from the Caribbean.

found in a weak state and repeatedly returned to shore. Marine biologists from the local environmental government agency of Sucre (CARSUCRE) were dispatched and rescued the dolphin, and with the help of veterinarians and biologists from the Fundación Omacha and the neighboring environmental government agency of Cordoba (CVS), the dolphin was moved to a local home pool for stabilization through the night before transporting it for rehabilitation at the CVS aquaculture station in Lorica, Córdoba, the next morning.

We identified the dolphin, which measured 180.4 cm in length and 53 kg in weight, as a female Clymene Dolphin (Fig. 2). Identification was based on color pattern and the distinctive "mustache" coloration on the top of the maxilla (Fig. 2a). It was found to be in relatively good shape, except for a few scars on its snout, probably from the stranding process and handling. Initial vital signs were lethargic in attitude, 90 bpm heart rate (HR), 4 s capillary refill time (CRT), and 18 breaths/5

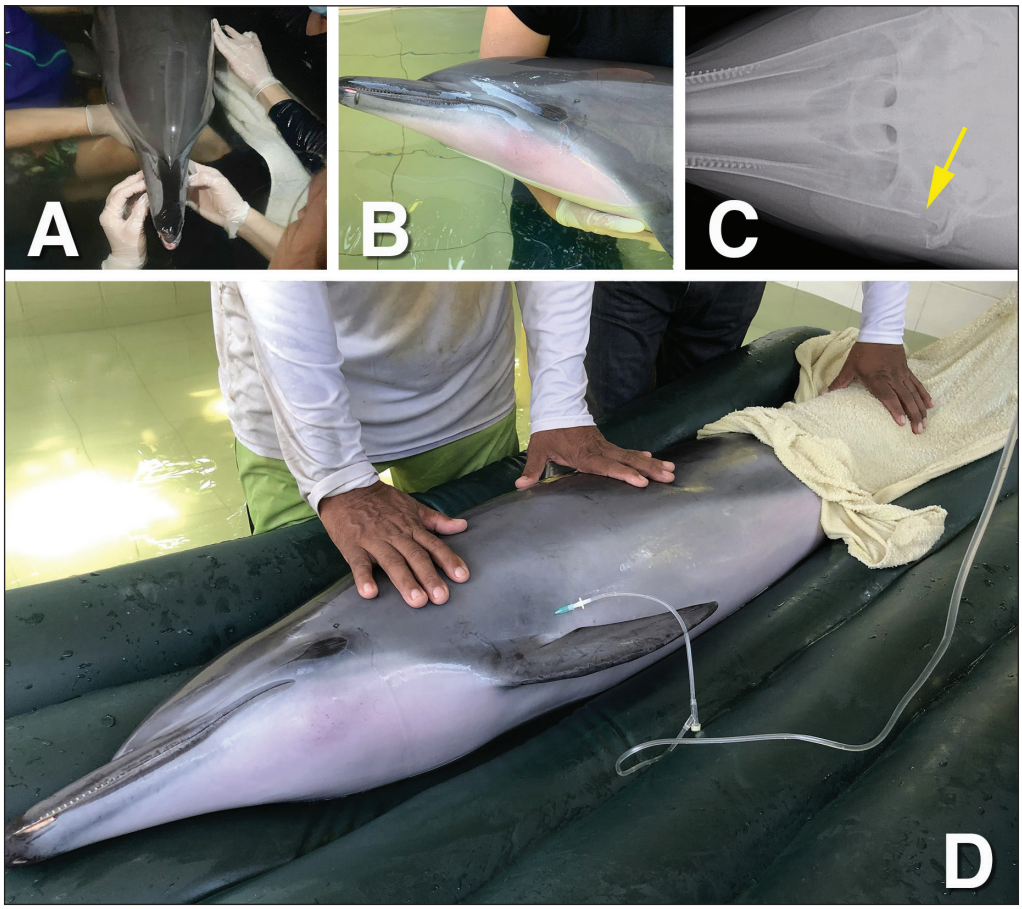

Figure 2. Views of a Clymene Dolphin from the Caribbean showing (A) its distinctive "mustache" coloration on the maxilla; (B) left lateral of anterior portion of the dolphin showing signs of a small ecchymosis on the left mandible just ventral to the eye; (C) dorsoventral radiograph of the skull showing a small fracture of the left mandible, just cranial to the coronoid process (yellow arrow); and (D) left lateral view while receiving subcutaneous fluid therapy.

min respiratory rate (RR). We estimated dehydration at 6% based on CRT and pale mucous membranes. Positive myoclonic twitches were evident throughout the body. There was a small region of ecchymosis on the left mandible just ventral to the eye (Fig. 2b). If left by itself, the dolphin could not come up on its own to breathe and would sink to the bottom with lateralization to its right.

At the CVS aquaculture station, the dolphin was placed in an 11,200-L, 11.2-m^3 freshwater tank for treatment and care around the clock. We conducted a veterinary examination, which included blood work (Table 1), nasal and anal swabs, and radiographs of the skull and mandible (Fig. 2c). Upon examination, we collected nematodes from the dolphin's mouth and stored them in 70% ethanol. Coprological

Table 1. Hemogram and blood chemistry for a Clymene Dolphin from the Caribbean.

Parameter	Units	Value
Erythrocytes		
Red blood cells (RBC)	x 10^6/uL	6.6
Hemoglobin	g/dL	20.0
Hematocrit/Pack Cell Volume (PCV)	%	62.0
Mean corpuscular value (MCV)	fl	92.6
Mean corpuscular hemoglobin (MCH)	pg	30.3
MCHC	g/dL	32.2
Platelets (PLT)	x 10^3/uL	180.0
Leucocytes		
White blood cells (WBC)	x 10^3/uL	9.3
Lymphocytes	%	9.0
Eosinophils	%	0.0
Monocytes	%	6.0
Neutrophils (heterophils)	%	85.0
Basophils	%	0.0
Liver-associated enzymes		
Alanine aminotransferase (ALT)	U/L	70.5
Aspartate aminotransferase (AST)	U/L	750.4
Alkaline phosphatase (ALP)	U/L	201.0
Total bilirubin	mg/dL	0.8
Kidney-associated enzymes		
Blood urea nitrogen BUN	mg/dL	55.6
Creatinine	mg/dL	1.9
BUN/CREA ratio	-	2.9
Protein		
Total protein	g/dL	6.1
Albumin	g/dL	3.5
Globulin	g/dL	2.6
Albumin/globulin ratio	-	1.3
Electrolytes		
Sodium	mEq/L	153.7
Chloride	mEq/L	108.8
Potassium	mEq/L	4.1
Phosphorus	mg/dL	3.1
Magnesium	mEq/L	2.1
Calcium	mg/dL	3.9

examination showed green liquid feces of a 7.0 pH with no occult blood but positive for uncinariasis. We compared the complete blood count (CBC) and blood-chemistry levels to the normal ranges for a sister species, *Stenella attenuata* (Gray) (Pantropical Spotted Dolphin; St. Aubin et al. 2013). There were small differences associated with a slight state of dehydration, signs of erythrocytosis (6.6 x 10^6/uL, reference values: 4.0–5.6), accompanied by an increase in aspartate aminotransferase (AST; 750.4 U/L, reference values: 182–520), a slight increase in creatinine (1.9 mg/dL, reference values: 0.4–1.5) and total bilirubin (0.8 mg/dL, reference values: 0.0–0.3), and decreased calcium (3.9 mg/dL, reference values: 7.7–10.0). Bacteriology swabs cultured *Aeromonas* spp. (*hydrophila* (Chester) Stanier/*caviae* Popoff) from the blowhole and *Klebsiella pneumoniae* (Schroeter) Trevisan from the anus. Through radiographic images, it was possible to identify a small fracture in the left mandible, just cranial to the coronoid process, where a small focus of ecchymosis was externally visualized (Fig. 2).

We established a veterinary treatment protocol for the dolphin to deal with the following problem areas: (1) dehydration; (2) pain management; (3) metabolic (muscle) acidosis; (4) stress, myoclonus, and/or convulsions; (5) mandibular ecchymosis; (6) parasitism; (7) bacterial infection; (8) gastric ulcers; (9) hepatic protection; and (10) dietary needs (Table 2). A 24-hour watch was maintained, with volunteers assisting the animal to stay afloat, as the dolphin continued to not be able to come up to breathe on its own.

Once stabilized, the dolphin's vital signs improved to 60 bpm HR, 2 s CRT, pink mucous membranes, and 10 breaths/5 min RR and were maintained as long as the dolphin was in pain management medication and anxiolytic treatment. The latter medication also reduced the myoclonic twitches and occasional seizures. The dolphin, however, remained lethargic in attitude. Tube feeding the dolphin proved futile as the dolphin regurgitated all contents, except when tube-fed just freshwater. Despite all efforts, the dolphin died on the morning of 16 December 2018.

We performed a necropsy an hour after death and after complete morphometrics were taken (Table 3) following Norris (1961). We photographed the specimen from different angles to document color patterns and morphology (Fig. 3). Postmortem examination revealed a 15-cm curvilinear acute laceration along the cranial border of the right pectoral fin. Additionally, numerous (>20) acute ulcers were within the distal esophagus and in the main (fundic) stomach and forestomach. These were round, oval, or linear, with sharp edges, and varied from 3 to 20 mm. The forestomach, and to a lesser extent oral cavity and pharynx, together contained around 20 nematodes, later identified as *Anisakis* sp. There were multifocal-coalescing areas of lingual ulceration, together forming an 8 cm x 4 cm ulcer on the tip of the tongue. The lungs were mottled dark red and oozed serous froth on the cut surface, consistent with edema and congestion. Following the protocol of Slaoui and Fiette (2011), we collected ~2.5-cm portions of lung, kidney, heart, pancreas, esophagus, oral mucosa, lymph node, ovary, stomach, liver, spleen, cerebellum, and adrenal gland and immersed the samples in 10% neutral buffered formalin for 48 hrs. Portions of the formalin-fixed tissues were placed in histology cassettes and processed

using routine methods whereby tissues were immersed in a series of dehydrating alcohols and then embedded in paraffin wax. They were then sectioned at 4 µm thick using a microtome and stained with hematoxylin and eosin for microscopic evaluation. Histopathology confirmed acute ulcerative esophagitis and gastritis and demonstrated acute renal tubular necrosis with intratubular red granular pigmented casts (i.e., hemoglobinuric or myoglobinuric nephrosis).

The complete skeleton was salvaged and cataloged in the collection of the Fundación Omacha, Lorica, Colombia (Fig. 4). We recorded its vertebral formula (C7, T13, L17, Ca31; Table 4), and tooth counts (UR37, LR 39, UL 34, LL 36), consistent with the formula and counts known for the species. A skin sample was collected in 70% ethanol and used for DNA extraction and amplification (Qiagen DNeasy Blood and Tissue Kit, Düsseldorf, Germany) of a fragment of the mitochondrial control region (CR), using primers and amplification following Baker et al. (1998).

Table 2. Veterinary care protocol established for a Clymene Dolphin rescued from the Caribbean. LRS = Lactated Ringer's solution, SQ = subcutaneous, BID = *bis in die* or twice a day, PO = *per os* or orally, SID = *semel in die* or once a day, IM = intramuscular, DMSO = dimethyl sulfoxide, q24h = *qua 24 hora* or every 24 hours, H_20 = fresh water.

Problem area	Treatment
Dehydration	
Replacement	500 ml LRS and 500 ml 5% dextrose SQ BID for 3 days
Maintenance	200 ml LRS, 100 ml 5% dextrose and 100 ml H_2O PO (tubed) BID from day 4 forward until it accepts food or takes in fish gruel with out difficulties
Maintenance	Place dolphin in fresh water tank for 5 days, then change to salt water
Pain management	Carprofen 100 mg SID for 3 days, then re-evaluate or use if needed
Metabolic (muscle) acidosis	Vitamin E and Selenium 0.6 mg/kg IM SID (once)
Stress, myoclonic, convulsions	Diazepam 0.2 mg/kg IM SID for first 3 days, then 0.1 mg/kg IM SID for the next 3 days, then re-evaluate or use if needed
Mandibular ecchymosis	DMSO gel topical BID
Parasitism	Fenbendazole 10 mg/kg PO SID for 3 days
Bacterial infection	Ceftriaxone 20 mg/kg IM SID for 7 days, or Amikacin 7 mg/kg IM BID for 7 days
Stomach ulcers	Sulcrafate 1–2 g PO BID for 7 days Ranitidine 0.5 mg/kg PO q24h or omeprazole 0.1 mg/kg PO q24hr
Hepatic protection	Silimarina 150 mg PO BID for 7 days
Dietary needs	If it does not accept whole fish, prepare the following gruel and tube-feed 3 times a day 2 filets of fish 25 ml of cod liver oil 25 ml of salmon oil 100 ml of LRS 100 ml of 5% dextrose 50 ml of H_2O

Successfully amplified PCR products were cleaned using magnetic beads and sequenced at Universidad de los Andes on an ABI 3500. We edited and aligned sequences manually using the software Geneious Prime v.2020 (https://www.geneious.com) and, to corroborate species identification as *S. clymene*, conducted

Table 3. Morphometrics (in cm) for a Clymene Dolphin from the Caribbean (as in Norris [1961] and González-Delgadillo [2017]).

Morphometric	Value (cm)
Tip of snout to notch of fluke	180.4
Tip of snout to center of anus	132.0
Tip of snout to center of genitals	126.5
Tip of snout to center of umbilicus	85.0
Tip of snout to anterior insertion of flipper	42.5
Tip of snout to ear opening	34.5
Tip of snout to center of eye	29.1
Tip of snout to angle of mouth	25.0
Tip of snout to melon	11.0
Tip of snout to center of blowhole	28.3
Tip of snout to tip of dorsal fin	101.1
Center of eye to ear opening	5.4
Length of dorsal fin at base	27.0
Height of dorsal fin	16.5
Flipper internal length	20.2
Flipper external length	26.6
Flipper maximum width	8.0
Fluke span	40.9
Fluke width	11.5
Circumference at axilla	79.5
Maximum circumference	89.0
Circumference at umbilicus	85.5
Circumference at anus	52.6
Circumference at fluke base	15.5

Table 4. Selected postcranial meristics for a Clymene Dolphin from the Caribbean.

Post-cranial meristics	Number
Total no. of vertebrae	68
No. of cervical vertebrae	7
No. of thoracic vertebrae	13
No. of lumbar vertebrae	17
No. of caudal vertebrae	31
No. of hemal bones	16
No. of vertebral ribs	26
No. of sternal ribs	14
No. of scapula	2
No. of sternum	1
No. of hyoid bones	5
No. of humeri	2
No. of radii	2
No. of ulnae	2

a cluster analysis with 1000 replicas on "DNA Surveillance", a curated cetacean database from the University of Auckland (Baker et al. 2003). This analysis provided a species identification tree indicating the species more closely related to our "query" sequence using phylogenetic algorithms to provide evolutionary distances between the "query" sequence and the reference sequences (Fig. 5). The "query" sequence was then identified as *Stenella clymene*, and submitted to GenBank under accession number MT470364.

Additional to this first record, another Clymene Dolphin stranded freshly dead early in the morning on 20 July 2020 on Playas de Balsillas, Rincón del Mar, in the Department of Sucre, Colombia (9°44'53.5"N, 75°39'20.1"W) (Fig. 6). Photos taken of the dolphin allowed for positive identification as *Stenella clymene* based on

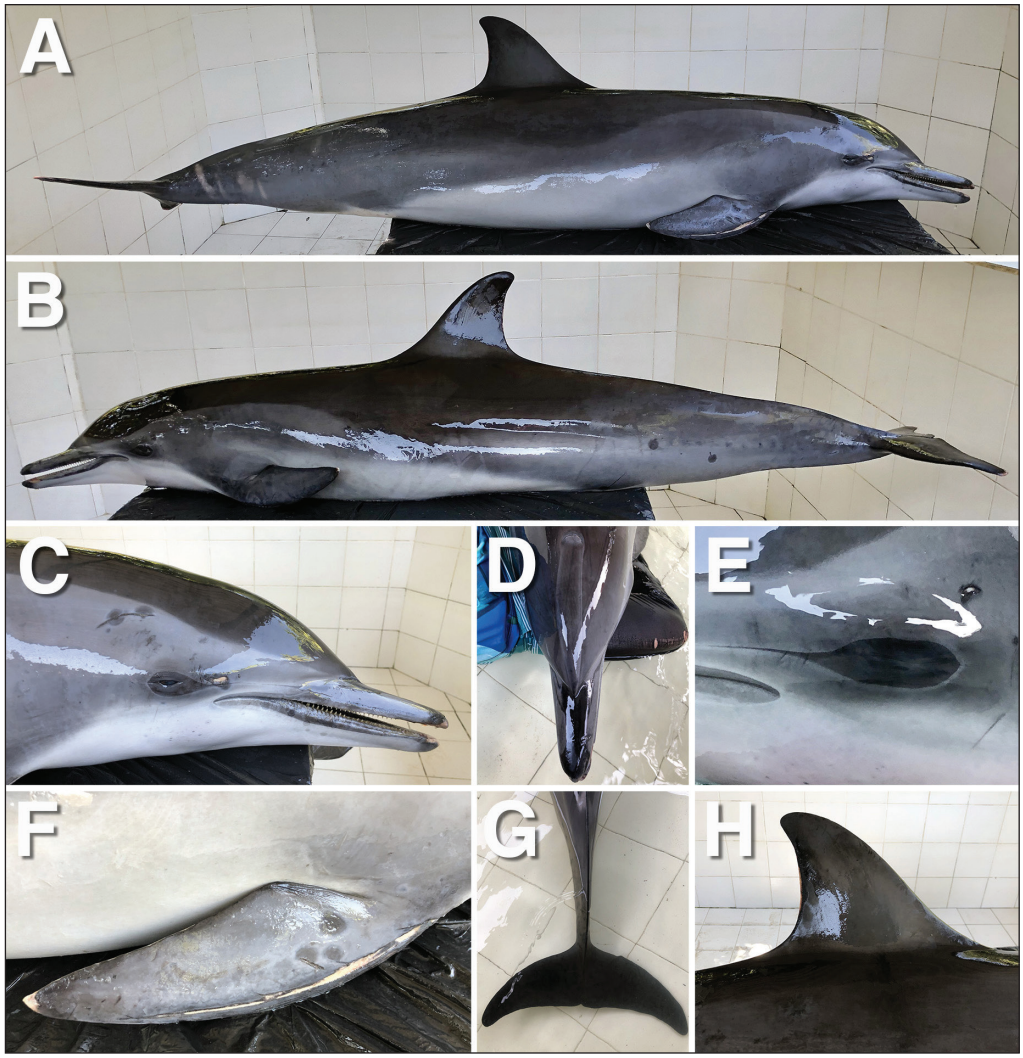

Figure 3. Body views of a Clymene Dolphin from the Caribbean, including (A) right and (B) left full lateral, (C) left lateral cranial portion, (D) anterodorsal, (E) left eye color pattern, (F) right flipper, (G) dorsal view of fluke, and (H) right side of dorsal fin.

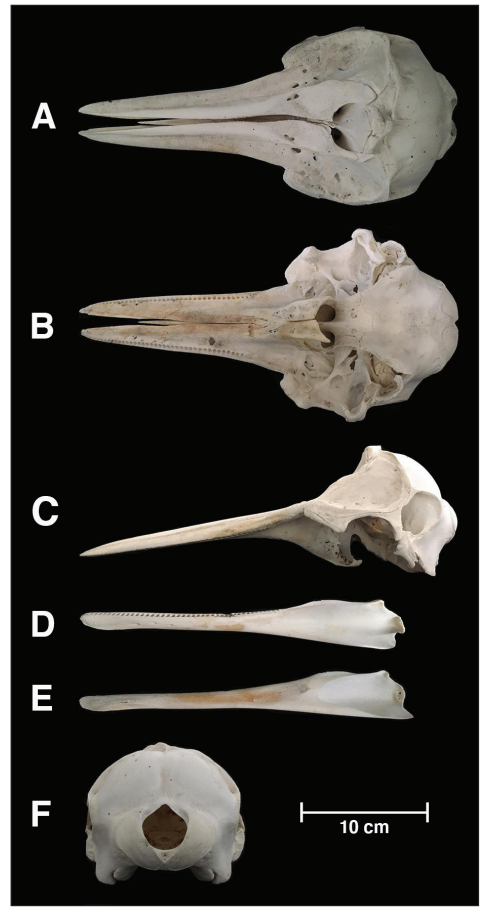

Figure 4. Views of the skull of a Clymene Dolphin from the Caribbean: (A) dorsal, (B) ventral, (C) right lateral, (D) right ramus external, (E) left ramus internal, and (F) posterior.

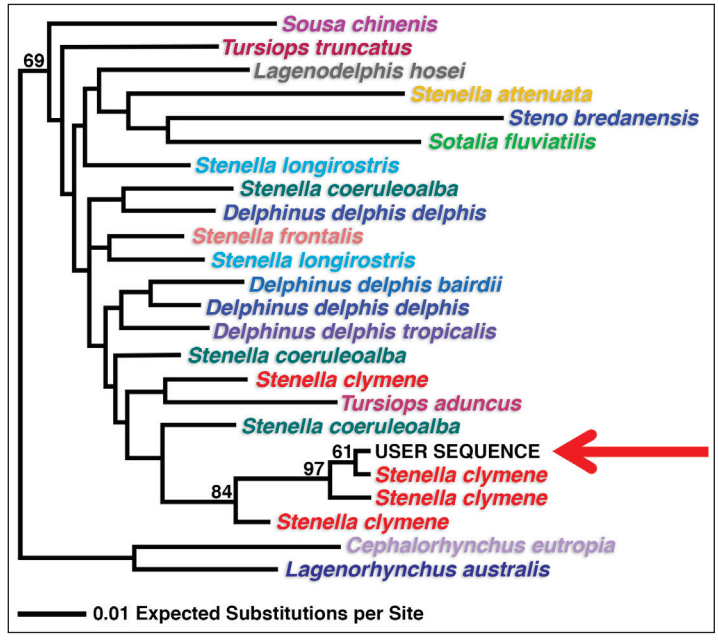

Figure 5. Neighbor-joining phylogenetic reconstruction showing the position of the query search for the control region mtDNA sequence generated for the 2018 Colombia Clymene Dolphin sample. The arrow shows that this "user sequence" (query search) was identified as the species *Stenella clymene*.

physical features, particularly its distinctive "mustache" on the snout (Fig. 6a, b). As in the 2018 stranding case, this dolphin also showed a small focus of ecchymosis on the caudal portion of the left mandible, just ventral to the eye (Fig. 6b). A round wound, 10 cm in diameter, typical of that produced by *Isistius brasiliensis* (Quoy and Gaimard) (Cookie-cutter Shark), was found on the right mid-portion of the dolphin's peduncle (Fig. 6c). Since the animal was fresh and no government action was received immediately upon finding the animal, the local fishermen removed the meat of the dolphin for their own consumption (N. Tapia-Robles, pers. comm.), a great zoonotic risk. No samples were collected from this specimen.

The occurrence of the oceanic and endemic Clymene Dolphin in the western North Atlantic is well documented for the Gulf of Mexico (Fertl et al. 2003, Jefferson 1996, Mullin et al. 1994), but published records for the Caribbean are scarce

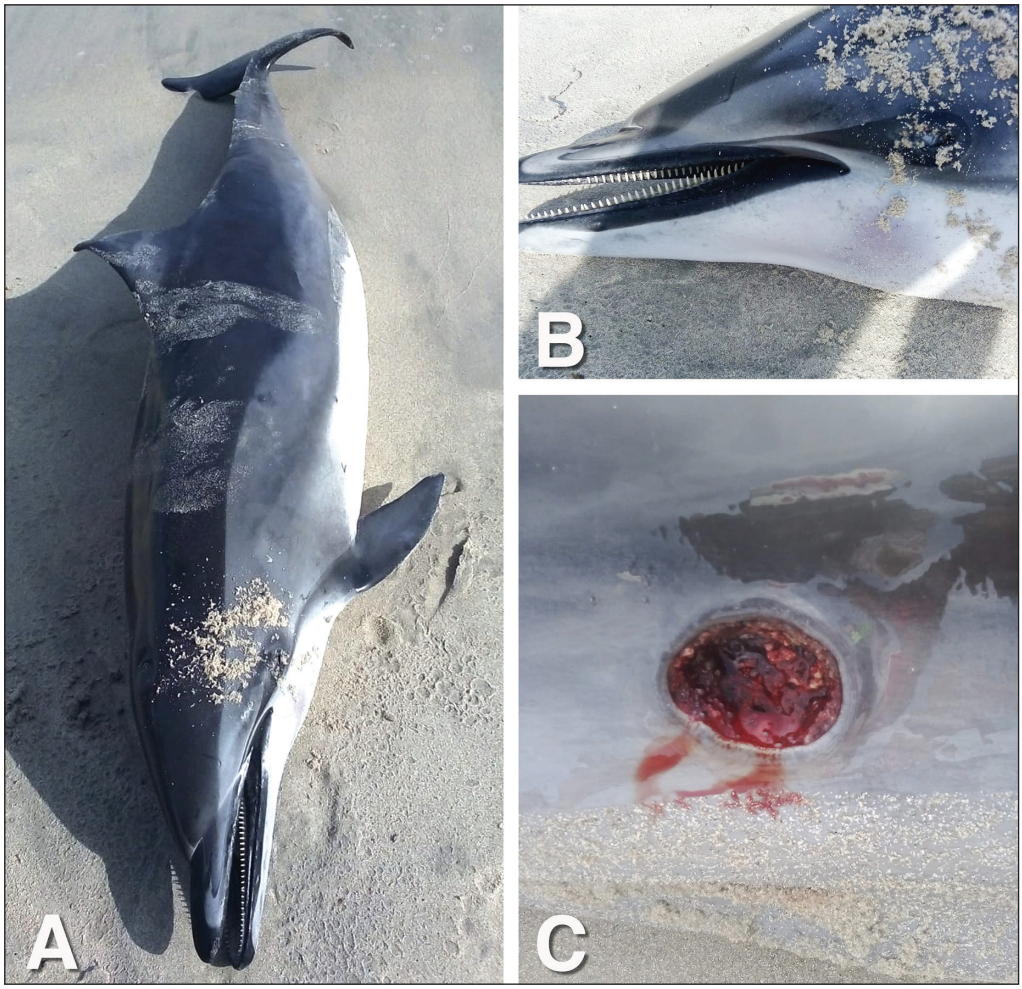

Figure 6. Clymene Dolphin stranded on Playas de Balsillas in Sucre on 20 July 2020, Colombia's second record for the species. (A) Left lateral view, (B) Left face view, (C) *Isistius brasiliensis* (Cookie-cutter Shark) wound on right mid peduncle. Photographs © Nehemías Tapia-Robles.

(Fertl et al. 2003). To date, only 5 captures, 21 sightings, and 10 stranding records have been reported from the Caribbean (Fig. 7). Perrin et al. (1981) and Perrin and Mead (1994) reported captures of Clymene Dolphins as part of the island fisheries for "island bacon" in Carriacou (Grenada) and Bequia (St. Vincent) in 1976, 1977, 1978, and 1989. Incidental capture of a dolphin in Venezuela thought to be a Clymene Dolphin (Agudo 1990, Romero et al. 2001), was later confirmed to be of a Spinner Dolphin (Bolaños Jiménez 1995), discounting the report of the species being used in Venezuela as bait on long-line fishing for sharks (Jefferson 2018). An unconfirmed *Stenella* spp. sighting from Jamaica (Caldwell 1961) is believed to be of a Clymene Dolphin (Jefferson and Curry 2003). Sighting records off Dominica in 1981, 1983, and 1984 (Watkins and Moore 1982, Watkins et al. 1985) and St. Lucia between 1999 and 2000 (Rambally 2000), were rejected as positive records for the species by Fertl et al. (2003) for lack of evidence and possibly mis-identification with Spinner Dolphins. Similarly, the putative sighting record of *S. clymene* on 4 November 2011 from 66 km N of Puerto Bolivar, Guajira, Colombia, and detailed in Caicedo-Herrera et al. (2018), is rejected as a positive *S. clymene* because of possible misidentification with a *Stenella frontalis* (G. Cuvier) (Atlantic Spotted Dolphin). Recent sightings of Clymene Dolphins include 15 records in deepwater channels in Belize in the 1990s (Ramos et al. 2016, Sanders et al. 1997); off Placencia and south of Turneffe Atoll, Belize, in 2017 and 2018, respectively (E. Ramos, City University of New York, New York, NY, USA, pers. comm.); near Xcalak, Quintana Roo, Mexico, in March 2010 (Niño-Torres et al. 2015); 6.2 km W of Îlets Pigeon, Guadeloupe, on 12 December 2015 (L. Bouveret and C. Millon, Observatoire des Mammifères Marins de l'Archipel Guadeloupéen, Guadeloupe,

Figure 7. Summary of known records of Clymene Dolphin for the Caribbean. Red triangles are captures, white circles are sightings, and yellow squares are strandings.

French Antilles, pers. comm.); and 7.5 km WSW of Soufriere, Dominica, on 1 March 2018 (Ascanio 2018; D. Ascanio, Ascanio Birding Tours, Caracas, Venezuela, pers. comm.).

Previous stranding records from the Caribbean include live strandings in Ambergis Cay, Belize, on 11 February 1991 (de la Parra 1998, Ramos et al. 2016); in Cancun, Quintana Roo, Mexico, on 17 October 1991 (de la Parra Venegas 1998), in Playa Kantenagh, Quintana Roo, Mexico, on 5 November 2003 (Aguilar-Aguilar et al. 2010); at the mouth of the mouth of Lake Maracaibo, Zulia, Venezuela, on 25 May 2009 (Briceño et al. 2020); and 25 km south of Mahahual, Quintana Roo, Mexico, in February 2013 (Niño-Torres et al. 2015). Four dead strandings were recorded in the French Antilles by Dabin (2020), including 1 off Baie du Francois, Martinique, on 15 July 2007; 1 off Petit Bourg, Guadeloupe, on 6 June 2012; 1 off Sainte-Anne, Guadeloupe, on 11 August 2012; and 1 off Pointe-Noire, Guadeloupe, on 22 May 2015. Two Clymene Dolphins stranded on 4 June 2018 on the east coast of Barbados (N. Simpson, United Nations Development Programme, Barbados, pers. comm.).

Rescue and veterinary care protocols for oceanic cetacean species are not well established, and treatment is usually adapted from well-known species under human care such as *Tursiops truncatus* (Montagu) (Common Bottlenose Dolphin; Nollens et al. 2018). Tables 1 and 2 provide suggested guidelines for non-traditional species under human care such as *Stenella* spp. Of veterinary treatment importance, the protocol implemented during the care of this individual allowed the patient to stay alive for almost a week when individuals of this genus (*Stenella* spp.) usually survive only hours or a few days after stranding (Bonsembiante et al. 2017). Recommendations for future cases include improvement in the therapeutics for analgesia, inclusion of spirometry and inhalation therapy in supportive care, and adjuvants therapy for renal and musculoskeletal injury. In terms of future imaging, we recommended complete radiographs of the lungs and head with dorsoventral, lateral, open mouth, and oblique contralateral projections to better characterize fracture patterns in the type observed in this patient (Houser et al. 2004, Loch et al. 2017). Additionally, a more thorough panel of blood biochemistry could be completed, with emphasis on analytes such as creatinine kinase (CPK), anion GAP, and acute-phase proteins, which can predict in less time, compared to the methods we used, what type of inflammatory alterations or tissue damage are occurring in the patient (Gelain and Bonsembiante 2019, Gulland et al. 2018, Miller et al. 2020). These results can be correlated with other diagnostic aids such as a urinalysis, which would have been useful when addressing macroscopic, microscopic, and chemical aspects of kidney alterations, such as myoglobinuria, hemoglobinuria, protein, blood traces, creatinine and urea, which are commonly used to diagnose kidney failure and myopathies (Bonsembiante et al. 2017, Jiménez-Zucchet et al. 2019), and biomarkers of renal function that allow monitoring recovery of the renal system during rehabilitation (Herráez et al. 2007, 2013).

Similarly, complete post-mortem analyses of gross internal findings, histopathology, and genetics yield important information that help understand the specific

stranding event as well as useful data that can be used in future oceanic dolphin stranding events to improve emergency care and treatment of Clymene Dolphins or related species. In this case, histopathology analysis revealed acute ulcerative esophagitis and gastritis and demonstrated pigmentary nephropathy. Given the lack of hemolytic anemia and the history of listing to one side, the renal lesion was considered to most likely represent myoglobinuric nephrosis, consistent with trauma resulting from the documented jaw fracture. The pathogenesis of the gastroesophageal ulcers was not microscopically apparent, but the history of regurgitation and involvement of the distal esophagus and linear nature of ulceration suggest damage to esophageal mucosa through gastric reflux, which may have been exacerbated by tube feeding. Gastric ulcers are common in cetaceans, and pathogenesis may involve stress or infectious agents (Gulland et al. 2001). *Anisakis* sp. nematodes were observed in the dolphin stranded in 2018. They have been previously reported for the species (Aguilar-Aguilar et al. 2010), and in one instance were similarly associated with gastric ulceration (Sánchez-Sarmiento et al. 2018), as has been widely documented in Common Bottlenose Dolphins and *Phocoena phocoena* (L.) (Harbor Porpoise) (St. Leger et al. 2018). The ethyology of the small focus of ecchymosis on the caudal portion of the mandible just ventral to the eye in both cases is unknown, other than caused by some type of intraspecies-caused trauma. It does not seem related to the stranding process as both are focused and there were no signs of abrasions or cuts in nearby areas. Cookie-cutter Shark wounds as on the *S. clymene* from 2020 in Sucre, Colombia, are a common occurrence on oceanic cetacean species (Pérez-Zayas et al. 2002) and were previously reported for the species from Carriacou, Grenada, by Perrin et al. (1981) and in the Gulf of Mexico by Grace et al. (2018). These data add to the scarce information regarding the health of wild Clymene Dolphin populations and provide some insight regarding challenges to their rehabilitative care.

Through the collection and sequencing of genetic material, we were able to confirm the species identification using a curated DNA database. Genetic material from Caribbean cetaceans is scarce and can provide important taxonomic information when compared regionally and/or globally with other populations of the same species (Caballero et al. 2012, Caballero-Gaitán et al. 2012, Chen et al. 2020, Dalebout et al. 2005, Engelhaupt et al. 2009, Tellez et al. 2014, Van Cise et al. 2019). Thus, collection of a small skin sample, its proper storage in 70% or higher ethanol (without methanol, isopropyl or other additives; commercial vodka is a good temporary substitute where ethanol is not available), and future analysis by a marine mammal geneticist is a paramount conservation tool for protected species such as the Clymene Dolphin.

Clymene Dolphins in the Caribbean are directly threatened by harpoon takes off the islands of St. Vincent and the Grenadines (Jefferson 2018) and indirectly by oil and gas exploration (Jefferson and Curry 2003). They appear to be occasionally subject to be used as bushmeat, as described by Cosentino and Fisher (2016), and documented in the 2020 Colombian stranding. Since strandings are infrequent,

little information is available about the biology, life-history, reproduction, and health of this species. While the species population estimates and trends are not known outside the US Gulf of Mexico and western North Atlantic coast, these threats and scant biological data, in addition to the fact that the Clymene Dolphin is endemic and thus restricted to the tropical and subtropical North and South Atlantic oceans, makes the species vulnerable to depletion compared to other widely distributed cetaceans (Jefferson and Curry 2003). Thus, all information gathered from opportunistic stranding events, such as those described here, are of utmost importance to increase the knowledge and provide important information that can be used in the conservation of the Clymene Dolphin in the Caribbean and throughout its geographic range. These 2 stranding events constitute the eleventh and twelfth known strandings of the species for the Caribbean and the first and second records for Colombia.

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