

EASTERN CARIBBEAN CETACEAN NETWORK
DICHOTOMOUS KEY BASED ON EXTERNAL APPEARANCE FOR CETACEANS



1A. Double blowhole on top of head; teeth absent; baleen plates suspended from upper jaw.— (photo of baleen and blowholes). *Go to 2.*

1B. Single blowhole on top of head; teeth present (although sometimes not protruding from gums). If skin is present, only 1 visible blowhole on top of its head (a bare skull will show 2 blowhole openings). *Go to 8.*

2A. Has no dorsal (on back) fin or hump, no throat grooves or creases on chin, upper jaw and mouth line strongly arched when viewed from top and side; callosities (roughed areas of skin to which whale lice attach) on head, lower lip and around eyes; 200-270 long, narrow baleen up to 2.8 m (9.2 ft long); robust body, black, often with white ventral blotches; large head is about 1/3 length of body; maximum body length 17 m, 56 ft.
—*Eubalaena glacialis*—**North Atlantic right whale.**

2B. Long ventral pleats; dorsal fins present; upper jaw relatively flat when viewed from the side and broad from the top. *Go to 3.*

3A. Flippers 1/4 -/ 1/3/ of body length, with knobs on leading edge; flukes with irregular edges; large knobs protruding from top of head and tip of lower jaw; < 36 broad, throat grooves extending at least to navel; 270-400 black to olive brown baleen plates with gray bristles/side (>80 cm, 31.5 in. long); dorsal fin usually atop a hump;; serrated fluke edge; maximum body length 16 m, 52.5 ft.
—*Megaptera novaengliae*—**Humpback whale.**

3B. Flippers <1/5 of body length, lacking knobs; 32-100 fine ventral pleats; head lacking knobs; flukes more or less smooth on trailing edges. *Go to 4.*

4A. Ventral pleats end before navel. *Go to 5.*

4B. Ventral pleats extend to or beyond navel. *Go to 6.*

5A. Ventral pleats 50-70, ending before navel; dark upper body with sharply pointed snout with white belly; white band on both dark pectoral flippers; 230-285 coarse, bristle yellow-white baleen plates per side; maximum body length 10 m.
—*Balaenoptera acutorostrata*—**Minke whale.**

5B. Ventral pleats 32-60, longest ending past flippers, but well short of navel; dorsal body is uniformly blue, gray, brown or black; snout turned slightly downward at tip when viewed from side; 318-340 black plates per side, with many fine whitish bristles; both lower lips gray; flippers all dark, falcate dorsal fin, slightly notched fluke; maximum body length 16 m, 52.5 ft.

—*Balaenoptera borealis*—**Sei whale**.

6A. Three parallel, conspicuous longitudinal ridges from blowholes to tip of snout; 40-70 long throat grooves extend past navel; baleen dark gray with; 250-370 plates per side; may have mottled skin; dorsal (upper) side is usually dark; both lower lips uniformly gray, head coloration symmetrical; maximum body length 16 m, 52.5 ft

—*Balaenoptera edeni*—**Bryde's whale**.

6B. Only 1 prominent ridge on snout: 55-100 ventral pleats. *Go to 7.*

7A. Head broad and almost U-shaped; 40-70 ventral pleats extending to navel; dorsal fin very small (1 % of body length) and set far back on body. head coloration symmetrical. Dorsal (back) (upper) body is blue-gray with light mottling especially behind the head region; 40-70 throat grooves; 270-395 baleen plates per side, to 1 m (3 ft) long; short stubby dorsal (back) fin; maximum length 7-30m (23-98.4 feet) with slightly notched fluke.

—*Balaenoptera musculus*—**Blue whale**.

7B. Head coloration asymmetrical: left side gray, much of right side, particularly right lower jaw, white; back dark with light streaks and chevron; 1 prominent ridge on snout; 56-100 throat grooves; right front plates white, rest gray to white; 260-480 gray per side; ventral (underside) fluke is light, dorsal (top) fluke is dark; pale blaze or chevron prominent on right side especially; maximum length 24 m, 78.7 ft.

—*Balaenoptera physalus*—**Fin whale**.

8A. Upper jaw extending well past lower jaw. Lower jaw very narrow. *Go to 9.*

8B. Upper jaw not extending much or at all past lower jaw.; lower jaw and upper jaws about equal in width (beaked whale or delphinid) *Go to 11.*

9A. Dark body with extremely wrinkled skin, dorsal (back) hump on back (instead of dorsal (back) fin) followed by series of humps or “knuckles” (prominent ridges from dorsal (back) hump to fluke), S-shaped blowhole on left side at front of head; 36-50 peg-like teeth in lower jaw that fit into upper jaw sockets; narrow underslung lower jaw; squarish head measuring up to 1/3 body length; Maximum body length 4-18m (13-59 ft) (males and females differ).

—*Physeter macrocephalus*—**Sperm whale**.

9B. Body <4 m, 13.1ft. head < 15 percent of body length blowholes set back from front of head; prominent dorsal fin; 8-16 long, thin, sharply pointed teeth in each side of lower jaw that fit into upper jaw sockets. (Note: Both species of *Kogia* are generally difficult for non experts to distinguish). *Go to 10.*

10A. Inconspicuous throat creases; dorsal fin relatively tall (>5 percent of body length) and “dolphin like”; located near middle of back; prominent hooked dorsal (back) fin with broad base located aft of mid-back, short broad flippers located far forward on body, skin may appear wrinkled; 1-2.7m (4-9 ft); 16-22 long, fang-like teeth in lower jaw only; may also have 0-6 smaller teeth in upper jaw; squarish head; dark gray back, lighter down sides to white belly; pale crescent-shaped “false gill” behind each eye.

—*Kogia simus*—**Dwarf sperm whale**.

10B. Throat creases generally absent; short, rounded dorsal fin (<15 body length) located in 1st 1/3 of back, smooth skin, light colored circular mark anterior (in front of) to eye; 1.2-3.7m (4-12

ft); 12-16 sharp teeth *in each half* of lower jaw only (long, curve inward; squarish head with tiny under-slung lower jaw; no throat creases; pale crescent-shaped “false gill” on each side between eye and flipper.

—*Kogia breviceps*—**Pygmy sperm whale.**

11A. Two conspicuous creases on throat forming forward –pointing V: notch between flukes usually absent or indistinct dorsal fin relatively short and set well behind mid-body. *Go to 12.*

11B. No conspicuous crease on throat prominent median notch in flukes; dorsal fin near middle of back or in forward 1/3. *Go to 15.*

12A. Forehead, beak and chin are cream or white in color, may have blotches (spots) on the ventral (underside), golden tan to reddish brown, dark eye patch; 2.7-7m (8.8-23 ft)

—*Ziphius cavirostris*—**Cuvier’s Beaked whale.**

12B Medium-sized beak with prominent melon delineated by slight indentation at blowhole; dark gray dorsal (back) body; dorsal (back) fin is darker than back, slight ridge from dorsal fin to fluke; posterior (rear) one-third of the body is lighter in color than the anterior (front) body; dark eye patch around the eyes. If teeth are erupted (on adult males) they are visible at tip of the lower jaw and lean forward. Maximum body length 2.1-5.3m (7-17.4 ft).

—*Mesoplodon mirus*—**True’s Beaked whale.**

12C. Usually 1 pair flattened teeth well behind tip of lower jaw (erupted only in adult males); head small; prominent beak with forehead rising at shallow angle; sometimes flippers fit into depressions on the body; scratches and scars common on some animals; maximum body length 5.5 m, 9.7 ft. *Mesoplodon* sp. *Go to 13.*

13A. Lower jaw is highly arched and massive in males; tusks of males very large and oriented slightly forward; forehead flattened; dark gray to black on back with lighter ventral (under) side; prominent dorsal (back) fin; Arched jaw and body coloration, large pale oval blotches all over body and flukes; 2.1 –4.7m (7-15 ft; 0 teeth in upper jaw; 1 pair visible on adult males, erupted in lower jaw (flat and triangular).

—*Mesoplodon densirostris*—**Blainville’s Beaked whale.**

13B. Mouth line relatively straight or only slightly arched; tusks of adult males not on arches. Maximum body length 5.5 m, 18.0 ft. *Go to 14.*

14A. Slender beak, dark coloration around eyes, small head with indentation at blowhole; dorsal (upper) body uniformly dark gray, belly lighter with irregular white blotches (spots) may be visible on the ventral (under) side.

—*Mesoplodon europaeus*— **Gervais’ beaked whale.**

Photograph showing:

- 2.1-4.6m (7-17 ft)
- 1 pair visible on adult males, located 10 cm (4 in) from tip of lower jaw
- Flukes unnotched
- Short tapered flippers set low on body

14B. Teeth of adult males protrude outside of mouth in middle of lower jaw: vestigial teeth sometimes present in both jaws; beak slender and long.

—*Mesoplodon bidens*— **Sowerby's beaked whale.**

15B. Head with prominent beak. *Go to 21.*

16A. No obvious beak or snout, rounded forehead blunt with shallow, vertical crease; oval-shaped teeth only in lower jaw, may be absent or extensively worn; prominent dorsal (back) fin tall and dark and sickle-shaped flippers; born light gray, subadults brown, then pale to grayish with age, head and body white on older animals, and extensive scarring, scratches and splotches; 1.5-4m (5-13.1 ft); teeth thick and peg-like; fewer than 14, in lower jaw only.

—*Grampus griseus*—**Risso's dolphin.**

16B. Teeth (>7 pairs) in both upper and lower jaws; forehead with out vertical median crease; predominant color black or dark gray. *Go to 17.*

17A. Black dorsal (back) coloration, white chest with obvious white oval patch posterior (behind) eye, large prominent dorsal (back) fin; 2-10 m (7-32 ft.); 20-26 upper and lower row, conical teeth; large rounded flippers; large dorsal (back) fin mid-back (2m or 6ft adult males).

—*Orcinus orca*—**Killer whale.**

17B. Flippers long and slender with pointed or blunt tips. *Go to 18.*

18A. Dorsal fin low and broad based, located on forward 1/3 of back; head bulbous; body black to dark gray with light anchor-shaped patch on belly and often light gray saddle behind dorsal fin; often light streak above and behind each eye; long sickle-shaped flippers; deepened tail stock; 7-13 pairs of teeth in front half only of each jaw. *Go to 19.*

18B. Dorsal fin near middle of back. *Go to 20.*

19A. Flipper length 18-27 percent of body length (long flippers up to 1/5 of body length, flippers are sharply arched, with prominent "elbow"); 8-13 teeth/row; maximum body length 6.3 m, 20.7 ft; bulbous head with prominent melon (forehead), slight beak. (Note: distribution limited to cold temperate regions of the North Atlantic and southern hemisphere.); 1.7-7.6m (5.5-25 ft); peg-like teeth: 16-24 upper and lower row.

—*Globicephala melas*—**Long-finned Pilot whale.**

19B. Flipper length 16-22 percent of body length (less than 1/6 of body length), robust body, bulbous head with prominent melon (forehead) and slight beak, flippers gently curved; 1.7-6m (5.5-20 ft); peg-like teeth: 14-18 upper and lower row.

—*Globicephala macrorhynchus*—**Short-finned Pilot whale.**

20A. Flippers with distinct humps on leading edge; mouth is uniformly dark, body all black except faint patch on chest, no beak, no cape; tapered head, dorsal (back) fin and flippers; 7-12 large stout teeth in each half of both jaw; 1-2.7 m (3-7 ft).

—*Pseudorca crasidens*—**False Killer whale.**

20B. Body black or dark gray with white lips. White to light gray patch on belly; flippers lack humps on leading edges. 1 8-25 teeth/row. *Go to 21.*

21A. Long, rounded head with slight melon and no beak, long flipper tips rounded, white lips, chin ("goatee"); face with dark "mask" (often not visible if specimen is not fresh); light stripe on melon that widens from blowhole to rostrum tip; faint cape that dips low below dorsal fin; head

blunt and triangular from above; 1-2.9 m (3-9.5 ft.); teeth small, pointed; 26-33 upper row, 22-26 lower row.

—*Feresa attenuata*—**Pygmy Killer whale.**

21B. More than 15 slender teeth/side in each jaw; flippers sharply pointed at tip; face with dark “mask” (often not visible if specimen is not extremely fresh); light stripe on melon that widens from blowhole to rostrum tip; faint cape that dips low below dorsal fin; head blunt and triangular from above; maximum body length 2.75m, 9.0 ft.

—*Peponocephala electra*—**Melon-headed whale.**

22A. Head long, conical and tapers to a point, beak runs smoothly into forehead with no crease; flippers end in a distinct point, face is darker than the rest of the body, lips often white, body dark gray to black above and narrow cape that dips far down sides; body with many scratch and splotches; 0.9-2.7m (35 in.-9 ft); teeth large vertically ridged: 40-54 in upper and lower row.

—*Steno brendanensis*—**Rough-toothed dolphin.**

22B. Beak distinct from forehead (set off by crease). *Go to 23.*

23A. Short beak, thin pointed flippers, relatively small flukes and dorsal fin located mid-back; broad dark stripe from eye to anus area on some animals; dorsal fin only slightly recurved body stocky; extremely short, but well-defined beak; deep grooves on palate 1-7.5m (3-7.5 ft); teeth sharp and conical, 38-44 teeth/row.

—*Langenodelphis hosei*—**Fraser’s dolphin.**

23B. Beak moderate to long (>3 percent of body length); appendages of normal dolphin proportions. *Go to 24.*

24A. Moderately, long, robust snout, set off by distinct crease; body moderately robust; color dark to light gray dorsally fading to white or even pink on belly; prominent dorsal and dark dorsal cape and light spinal blaze sometimes visible; beak; long and relatively narrow flippers that come to distinct point; small, conical teeth: 20-26 teeth in each half of upper jaw; 18-24 in lower jaw; maximum body length 3.8m, 12.5 ft.

—*Tursiops truncatus*—**Bottlenose dolphin.**

24B. Teeth/row >30. *Go to 25.*

25A. Erect to slightly falcate dorsal fin; dark back and white belly tan to buff thoracic patch and light gray streaked tail stock form hourglass pattern crossing below dorsal fin; chin to flipper stripe; 41-60 teeth/row; palate with 2 deep longitudinal grooves; maximum body length 2.6 m, 8.5 ft. *Go to 26.*

25B. No hourglass pattern on side; flipper stripe (if present) runs from eye or gape, not chin; palatal grooves shallow (if present). *Go to 27.*

26A. Distinctive black back and cape form V-shaped saddle that dips below dorsal fin; “hour glass” pattern on the sides: tan patch (forward) and gray patch (aft); tail stock is gray, ventral (under) side is lightly colored but flippers are dark in color; black beak, eye ring and line from jaw to flipper.

—*Delphinus delphis*—**Common dolphin.**

26B. Body relatively slender; beak longer; melon flatter; thoracic patch not contrasting as strongly with cape; flipper stripe meets lip patch near or just ahead of gape, remains wide ahead of eye; eye patch not as strongly contrasting; light patches on extremities faint if present; 47-60 teeth/row; maximum body length 2.6m. 8.5 ft.

—*Delphinus capensis*—**Long-beaked Dolphin**

27A. Color pattern black to dark gray on back and white on belly, with prominent black stripes from eye to anus and eye to flipper (“bilge stripe”); light gray spinal blaze extending to below dorsal fin (not always visible with white or pink ventral side; 39-55 teeth/row; maximum body length 2.6 m. 8.5 ft.

—*Stenella coeruleoalba*—**Striped dolphin.**

27B. No continuous stripe from eye to anus. (Note: If a stripe from the eye to the anus is present, it does not reach the eye.) *Go to 28.*

28A. Generally, color pattern two part (dark cape with lighter sides and belly); beak tip is light; light to heavy spotting present on dorsum of adults (on some individuals, spots may be absent); flipper stripe (if present) runs from gape, not eye; no palatal grooves. *Go to 29.*

28B. Color pattern three-part (white belly, light gray sides, dark gray cape); beak tip dark; usually dark line on top of snout; no spotting on dorsum of adults; cape dips only slightly, to lowest point at level of dorsal fin; eye-to-flipper stripe present; shallow palatal grooves sometimes present. *Go to 30.*

29A. Body moderately robust, dark gray above with white belly; light spinal blaze (sometimes obscured by spots); skught to heavy spotting on adults (spotting may be nearly absent on subadults); tip of beak of upper jaw is white, usually thick, white lipped, tall dorsal dark upper body with light underside, dark pectoral (front) flippers; 30-42 teet/row; maximum body length 2.3 m. 7.5 ft.

—*Stenella frontalis*—**Atlantic spotted dolphin.**

29B. Dorsal fin narrow and strongly falcate; long beak, white-tipped beak and lips, biocolored with dark back and light gray sides and belly, distinct dark cape sweeps to lowest point on side in front of dorsal fin; adults generally with dorsal spotting and gray bellies (spotting sometimes absent) 34-48 teeth in each half of each jaw; maximum body length 2.6 m, 8.5 ft. body may be spotted.

—*Stenella attenuata*—**Pantropical Spotted dolphin.**

30A. Thick, short and broad beak; falcate (pointed back) dorsal fin; distinct cape (patch on back) dips above eye and below dorsal fin; ventral (under) side is pale; black lips, snout light gray with dark tip, dark lips, and black line from tip to apex of melon; dark “mustache” present on top of beak; beak generally <7 percent of tal length; 38-52 teeth/row; maximum body length 2 m, 6.6 ft.

—*Stenella clymene*—**Short-snouted Spinner dolphin.**

30B. Slightly falcate to erect dorsal fin ; beak exceedingly long with slender body; dark stripe from eye to flipper; black lips and beak tip; adult males have prominent ventral keel; tricolor pattern which may be obscured: slender dark gray cape dips below dorsal fin, light tan-gray sides, white belly; 45-64 very fine, sharply pointed teeth/row; maximum body lent=gth 2.4 m, 7.9 ft.

—*Stenella longirostris*—**Long-snouted Spinner dolphin.**

Long beak, broad flippers, cape (patch on back of animal) slopes down to a point under the dorsal (back) fin—

Sotalia fluviatilis—**Tucuxi**.

Photograph showing:

- 80 cm-1.8m (28 in-6 ft)
- 52-70 teeth in upper and lower jaw

DRAFT

Adapted from *Marine Mammals of the Gulf of Mexico: Identification Key for Cetaceans*, pp. 43-51. Bernd Wursig, Thomas Jefferson, and David Schmidly, Moody Natural History Series, 2000. Also refer to Key to skulls pp. 51-80.