

## *Tursiops truncatus* Behavioural Catalogue

#	CODE	BEHAVIOUR	DEFINITION	REFERENCE
<b>LOCOMOTORY &amp; POSTURAL BEHAVIOUR</b>				
1	SWM	Directional swim	One dolphin moves in a dorsal fin up position making forward progress in a single general direction. Direction changes can occur, but usually are not erratic or rapid. Body is generally extended along the long axis and swim speed is relatively stable.	Miles J. A. & Herzing D. L., 2003
2	BUP	Belly up swim	Forward progress with the belly upward	Muller, M., Boutiere, H., Weaver, A. & Candelon, N., 1998
3	SID	Side swim	Forward progress in a 90-degree rotation from the dorsal position, orienting one pectoral fin upward and the other downward	Muller, M., Boutiere, H., Weaver, A. & Candelon, N., 1998
4	SRD	Swim random	Dolphins showed frequent changes in heading that sometimes appeared as a transition behaviour between other behavioural states	Constantine R., Brunton H. D. & Dennis T., 2004
5	RST	Rest	The dolphins stayed still at the surface for a long time (5s-55min) keeping the blowhole and the tip of dorsal fin at the surface and bending the posterior part of the body down at an angle of about 45°	Seikiguchi Y., & Kohshima S., 2003
6	LIE	Lie	Hanging (any position but vertical) in water column or lying flat on the seafloor	Dudzinski K.M., 1996
7	SPY	Spy hop	Brief vertical or near-vertical elevation of the body and head-up exposure of the foresection followed by a sinking return to the water	Muller, M., Boutiere, H., Weaver, A. & Candelon, N., 1998
8	FKO	Fluke out	A dolphin hung vertically in the water, head downward, the tail and the peduncle protruding above the water.	Karczmarzki L., Thornton M. & Cockcroft V.G., 1997
9	VST	Vertical stand	Dolphin hangs/suspends itself vertically with its head up or down in mid-water column.	Miles J. A. & Herzing D. L., 2003
10	APP	Approach	A directional swim oriented towards the other dolphin, after swimming alone	Miles J. A. & Herzing D. L., 2003
11	LEA	Leave	A directional swim oriented away from the other dolphin, after unidirectional swim or parallel swimming	Miles J. A. & Herzing D. L., 2003
12	EXP	Exploratory behaviour	Scanning perpendicular/horizontal relative to bottom.	Herzing D.L., 1995
13	OMT	Open and close mouth	Brief opening and closing of mouth	Ostman J.S.O. & Folkens P.A., 1996
14	VAR	Ventral arch	Dolphin body aligns in a crescent shape usually head up and perpendicular to the sea floor. Head and flukes are bent towards each other, extending the back and compressing the belly region.	Miles J. A. & Herzing D. L., 2003
15	DAR	Dorsal arch	Head and flukes bent outwards extending the belly region and compressing the back.	Miles J. A. & Herzing D. L., 2003
16	SAR	Side arch	The dolphin lifted its head while arching its tail stock and twisting it to one side.	Nelson D.L. & Lien J., 1994
17	FLX	Flexion	The fluke and caudal peduncle moved ventrally and as the flexion reached its maximum, the tail approached an angle of 45 degrees from the horizontal. Often the head also bent ventrally. At the maximum the entire body formed an arch, and the muscles are taut. Then the animal relaxed and the tail was raised dorsally	Tavolga M.C. & Essapian F.S., 1957
18	PJR	Pectoral jerk	Rapid, jerky movements back and forth with, generally extended, flippers.	Ostman J.S.O. & Folkens P.A., 1996
19	TRU	Tank rub	They often rub their bodies against an object, floor, the bottom, the side of the basin. When swimming on the side, belly in front of the wall, they keep a contact of their flippers with the wall	Sylvestre J.P., 1985
20	ROL	Roll	The body is rotated through 360° on the longitudinal axis to either side of the dolphin.	Renjun L., Gewalt W., Neurohr B. & Winkler A., 1994
21	LOO	Loop	The dolphin emerging out of the water at an acute angle, brings its ventral side to the surface. It then returns into the water describing a large loop.	Martinez D.R. & Klinghammer E., 1978
22	SOM	Somersault	Tail dorsally/ventrally over head in a somersault.	Ostman J.S.O. & Folkens P.A., 1996
23	STP	Stop	Suddenly stops dead in water after swimming forward.	Ostman J.S.O. & Folkens P.A., 1996
<b>SOCIAL BEHAVIOUR</b>				
24	CHA	Chase	Dolphin is rapidly following a dolphin in flee position, with its head orienting towards the tail of the lead dolphin, and also can involve swimming with dorsal fin down and belly up, i.e. inverted chasing	Miles J. A. & Herzing D. L., 2003
25	CNT	Contact	Any form of body contact other than pounce, usually not forceful	Slooten E., 1994
26	RUB	Rub	One individual actively rubs a body part on another individual.	Connor R.C., Wells R.S., Mann J. & Read A.J., 2000
27	MOU	Mouthing	Activity similar to nuzzling, but took place with the mouth open. At time one animal took a flipper, fluke, head or snout of the partner between the teeth and gently closed the mouth upon it, thereby holding the part.	Tavolga M.C. & Essapian F.S., 1957
28	NBL	Nibbling	Nibbling at another's body, usually at the flukes	von Streit C., 1995
29	BIT	Bite	One animal draws the open jaws across another animal's body or extremities; often leaving parallel lines	Pryor K., 1990
30	DOM	Direct open mouth	Opened mouth directed at another; often with abrupt vertical head movement	Samuels A. & Gifford T., 1997
31	JCL	Jaw clap	Dolphin opens and shuts its jaws rapidly [...] once or consecutive times. A loud clapping sound is made.	Miles J. A. & Herzing D. L., 2003
32	BTB	Belly to belly swim	One dolphin swims parallel to another, belly to belly, with or without contact and simply mirroring the other dolphin's movement	Miles J. A. & Herzing D. L., 2003

33	BND	Bond	One dolphin rests its pectoral fin against the flank of another dolphin, behind the other dolphin's pectoral fin and below or just posterior to the dorsal fin	Connor R.C., Mann J. & Watson-Capps J., 2006
34	BGP	Beak-genital propulsion	An animal invites a second animal to come up from below it and place the tip of its rostrum in its genital slit. The lower animal often turns partially on its side, sometimes supporting the horizontal flukes of the upper animal from its head to its outstretched pectoral flippers. In this position, the lower animal, its tail bent down slightly from the horizontal, propels the upper animal forward, only breaking from the pattern to rise for breaths of air. Sometimes it swims belly-up or dorsum-up during such propulsion	Johnson C.M. & Norris K.S., 1986
35	PUS	Push	Pushing body with its melon, rostrum, pectoral fins and body	Dudzinski K.M., Sakai M., Masaki K., Kogi K., Hishii T. & Kurimoto M., 2003
36	SQU	Squeeze	Swim in between 2 or more animals, pushing them apart.	Ostman J.S.O. & Folkens P.A., 1996
37	BSL	Body slam	A charging dolphin slams into another with any part of its body other than its rostrum, peduncle and tail, fins and pecs.	Connor R.C., 1995
38	HLD	Hold down	Hold another on bottom, usually by lying over the other's body	Samuels A. & Gifford T., 1997
39	RHT	Rostrum hit	One dolphins hits another dolphin with its rostrum	Dudzinski K.M., 1996
40	THT	Tail hit	One dolphin uses its fluke to hit another dolphin's head or body, can be done mid-watwer column or at the water surface	Miles J. A. & Herzing D. L., 2003

### MOTHER/CALF RELATED BEHAVIOUR

41	BMP	Bump	Before suckling, the calf usually started to swim underneath the mother, with its head touching the genital region	Kastelein R.A., Dokter T. & Zwart P., 1990
42	ASK	Suckling attempts	When there wasn't cessation of infant body movements.	Peddermos V.M., Fothergill M. & Cockroft V.G., 1992
43	SKL	Suckling	Is defined as being successful when the calf having inserted its lower jaw into the mother's urogenital groove and the upper jaw being in contact with the lateral skin of the mammary gland, stiffened its neck as if bracing, with a complementary cessation of tail flexing. In this posture, the calf was riding in the vortex created through the mother's momentum. This bracing of the body indicated the starting of milk intake.	Peddermos V.M., Fothergill M. & Cockroft V.G., 1992
44	MLE	Milk expulsion	She flexed her peduncle forward ventrally and expelled a large cloud of milk	Connor R.C. & Smolker R.A., 1990
45	NUR	Nurturant behaviour	When the infant is carried away from danger	Mann J. & Smuts B., 1998
46	PAS	Pass	One dolphin suddenly accelerates and rapidly swims directly towards and then next to (< 1 m) the infant causing the infant to veer away from another animal and follow him	Mann J. & Smuts B., 1998
47	CLS	Clasp	A mother swims belly-up at the surface with the calf between the pectoral fins	Mann J. & Smuts B., 1999
48	TOU	Tour	When a dependent calf repeatedly approaches and leaves ( within 2 meters ) from an adult or adolescent animal, or the baby remains at <.,= 2m from this animal while remaining >.,=5 m from the other.	Connor R.C., 1995

### SEXUAL BEHAVIOUR

49	BPR	Belly present	One dolphin turning its ventral surface towards another. Done by swimming on its side next to or upside-down under the other individual and within two body lengths	Slooten E., 1994
50	GIN	Genital inspection	Includes one dolphin inspecting the genital region of a second while producing a burst pulsed sound. No physical contact is observed	Dudzinski K.M., Thomas J.A. & Douaze E., 2002
51	ERE	Erection	Male showing penis out genital slit	Slooten E., 1994
52	GRD	Genital rub on dolphins	Genital rubs (on conspecifics)	Herzing D.L. & Johnson C.M., 1997
53	GOO	Goose	Rostrum-genital contact in which one individual moves its rostrum into the genital area of another, gently or roughly.	Connor R.C., Wells R.S., Mann J. & Read A.J., 2000
54	FMO	Fin/Fluke mount	Slowly progressing animals often swam with the tip of the dorsal fin or flukes of one dolphin inserted into the genital slit of its partner.	Saayman G.S., Tayler C.K. & Bower D., 1973
55	PIN	Penis insertion	Penis inserted into blow hole/anus of other (male or female).	Ostman J.S.O. & Folkens P.A., 1996
56	MAA	Mate attempts	When the male clasped the female with his flippers and making pelvic thrusts attempted to intromit his erect penis into the vagina.	Saayman G.S., Tayler C.K. & Bower D., 1973
57	MAT	Mate	Ventral contact between two dolphins, intromission observed	Slooten E., 1994

### AERIAL BEHAVIOUR

58	LEP	Leap	Entire Body clears the water (any Height). Exit and enter head first with venter/dorsum/side facing down.	Shane S.H., 1990
59	QLE	Quasi-leaps	The beak was entering the water while the tail had not yet emerged but the middle of the body was clearly above the water's surface	Hui C.A., 1989
60	VSL	Ventral slap	A dolphin raises itself out of the water to at least the dorsal fin or leaps clear of the water and then slaps its belly on the water surface. May be light or hard.	Connor R.C., 1995
61	SSL	Side slap	The dolphin comes out of the water and returns back to water on its side. Very often, only half or two-thirds of the body length is out of the water; the tail usually remains underwater	Bel'kovich V.M., Ivanova E.E., Yefremenkova O.V., Kozarovitsky L.B. & Kharitonov S.P., 1991
62	DSL	Dorsal slap	The foresection is elevated above the surface with the ventrum uppermost and dropped backward, landing noisily on the dorsum. Occasionally, the animal will emerge in a dorsal or lateral position and rotate on the long axis before dropping back. The end of the tailstock may be kicked out from under the body before landing	Muller, M., Boutiere, H., Weaver, A. & Candelon, N., 1998
63	HSL	Head slap	A dolphin, on its side or belly-up, raises its head out of the water and slaps the side of its head or the rostrum on the water surface. May be light or hard.	Connor R.C., 1995
64	PSL	Pectoral fin slap	Slapping the pectoral fin on the water surface	Mann J. & Smuts B., 1999

65	TSL	Tail slap	Flukes raised above the surface and ventral/dorsal side slapped downward, usually making a loud, percussive sound.	Shane S.H., 1990
66	TWK	Tail-Walk	One dolphin raises itself out of the water by more than two thirds the length of the body, furiously working the tail to remain in an upright pose for approximately ten seconds.	Bel'kovich V.M., Ivanova E.E., Kozarovitsky L.B., Novikova E.V., & Kharitonov S.P., 1991
<b>BUBBLE RELATED BEHAVIOUR</b>				
67	BUB	Bubble	Dolphins [...] expel air from their blowholes, generating large, amorphous bubbles that rise quickly to the surface	Marten K., Shariff K., Psarakos S. & White D. J., 1996
68	BUR	Bubble ring	Dolphins can blow smooth, stable rings of air that linger in the water for several seconds.[...] Dolphins puff out bubbles from their blowholes that become halos of air that expand in radius while decreasing in thickness as they rise to the surface. Sometimes can be emitted two rings in succession, which fuse together into a single, large ring.	Marten K., Shariff K., Psarakos S. & White D. J., 1996
69	BUS	Bubble stream	The animals also produced a column of small air bubbles coming from their blow holes (they were either blown all at once or gradually)	Delfour F. & Aulagnier S., 1997
70	TBR	Tail-made bubble ring	An energetic tail-slap against the surface with a concave body arch generated a bubble curtain on the top of the tail then the dolphin accomplished a decisive tail up movement with a convex body arch generating a strong floating air ring	Pace D.S., 2000
71	BIN	Bubble interest	Dolphin shows interest for the air bubbles [...] and/or follows them to the water surface	Pace D.S., 2000
72	BCN	Bubble contact	Dolphin bites/passes through/pushes the bubbles (derived from the ring rupture) or the ring	Pace D.S., 2000
<b>PLAY BEHAVIOUR</b>				
73	PLO	Play object	Transporting an object by using the outside of the beak, the flippers or the melon, passing and slightly touching an object, balancing/dribbling/catching/throwing and catching/pushing or pulling an object with the beak, pressing it under water /rolling it on the ground by using the beak or the body and holding it in the beak while swimming	Denkinger J. & von Fersen L., 1995
74	PLW	Play water	The dolphin opens its mouth and takes in a considerable amount of water then the Orca presses the water through its teeth and lips, the water forms a fountain-like spray.	Martinez D.R. & Klinghammer E., 1978
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