

Table S3. Aquatic and terrestrial sample sizes for each turtle for each plotted EMG timing variable

Variable	Turtles (aquatic cycles; terrestrial cycles)
Coracobrachialis	TS09 (20; 0); TS11 (20; 0); TS14 (20; 0); TS31 (0; 24); TS36 (20; 4)
Pectoralis Burst 1*	TS02 (0; 17); TS09 (20; 20); TS11 (18; 18); TS31 (0; 26); TS99 (2; 17)
Pectoralis Burst 2*	TS02 (16; 0); TS09 (20; 0); TS11 (20; 0); TS31 (20; 0); TS99 (20; 0)
Latissimus dorsi 'Burst 1'	TS11 (20; 18); TS31 (20; 24); TS36 (20; 4)
Latissimus dorsi 'Burst 2'	TS11 (20; 17); TS31 (20; 21); TS36 (20; 4)
Deltoid 'Burst 1'	TS09 (20; 20); TS11 (9; 5); TS14 (20; 5); TS31 (20; 26); TS36 (20; 0); TS99 (20; 21)
Deltoid 'Burst 2'	TS09 (7; 9); TS14 (14; 3); TS31 (1; 12); TS99 (20; 20)
Triceps Burst 1	TS02 (16; 17); TS09 (0; 19); TS11 (20; 8); TS14 (20; 16); TS31 (20; 10); TS99 (20; 22)
Triceps Burst 2	TS02 (16; 17); TS09 (0; 19); TS11 (11; 8); TS14 (10; 16); TS31 (15; 9); TS99 (20; 22)
Subscapularis (lat approach)	TS11 (20; 17)
Subscapularis (cor approach)	TS11 (20; 18); TS14 (20; 16)
Supracoracoideus (ant head)	TS11 (3; 0); TS14 (18; 12)
Supracoracoideus (post head)	TS02 (16; 0)

'Cor approach' indicates that the electrode was implanted into the muscle by inserting it more posterior and laterally (as if approaching the coracobrachialis); 'lat approach' indicates that the electrode was implanted into the muscle by inserting it more anteriorly (as if approaching the latissimus dorsi); ant, anterior; post, posterior.

'Burst 1' and 'Burst 2' refer to the early and late bursts, respectively; bursts of activity seen in muscles that present as a single continuous burst of activity that spans the switch from retraction to protraction.

*Aquatic EMGs for pectoralis showed a variable early burst that has been coded as Burst 1, with the 'typical' burst of activity being coded always as Burst 2, even if there is only a single burst. In this case, 1 and 2 refer to 'early' and 'late' activity. Terrestrial EMGs only showed a single burst of activity that was always coded above as Burst 1.