The following supplement accompanies the article

Trophic ecology of a green turtle breeding -population

Hannah B. Vander Zanden[1,*], Karen E. Arthur[2], Alan B. Bolten[1], Brian N. Popp[2], Cynthia J. Lagueux[3], Emma Harrison[4], Cathi L. Campbell[5], Karen A. Bjorndal[1]

[1]Archie Carr Center for Sea Turtle Research and Department of Biology, University of Florida, Gainesville, Florida 32611, USA
[2]Department of Geology and Geophysics, University of Hawaii, Honolulu, Hawaii 96822, USA
[3]Wildlife Conservation Society, Apartado Postal 59, Bluefields, RAAS, Nicaragua
[4]Sea Turtle Conservancy, Apartado Postal 246-2050, San Pedro, Costa Rica
[5]Wildlife Conservation Society, Bronx, New York 10460, USA

*Email: hvz@ufl.edu

Marine Ecology Progress Series: 476: 237–249 (2013)

Supplement 1. Additional data

MATERIALS AND METHODS

To report size as curved carapace length (CCL), conversions were made from alternate length measurements for green turtles *Chelonia mydas* sampled in Nicaragua and Inagua, Bahamas. Conversions to CCL were made using linear regression equations from other turtles measured at those sites. For the Nicaragua sites, direct CCL measurements were available for 32 of the individuals sampled. For the remaining 151 turtles, CCL values were derived from curved plastron length (CPL) measurements based on a regression of 814 adult turtles encompassing the size range of the sample population (CCL = 1.089 × CPL + 11.008, r^2 = 0.84) (Lagueux & Campbell unpubl. data). For Inagua, direct CCL measurements were available for 42 of the individuals sampled. For the remaining 20 turtles, CCL values were derived from straight carapace length (SCL) measurements based on a regression of 1421 juvenile green turtles encompassing the size range of the sample population (CCL = 1.043 × SCL – 0.345, r^2 = 0.99) (Bjorndal & Bolten unpubl. data).

Table S1. Mean and SE of $\delta^{13}C$ and $\delta^{15}N$ values of *Thalassia testudium* analyzed in this study and collected from the literature for sites in the Greater Caribbean. The standard error was not reported in the original study, it was calculated using the reported standard deviation and sample size. Site ID refers to the identification numbers in Fig. 2c of the main text ('Results')

Site ID	$\delta^{13}C$ (‰)	SE $\delta^{13}C$	$\delta^{15}N$ (‰)	SE $\delta^{15}N$	n	Location	Source
1	–6.6	0.1	1.2	0.2	9	Union Creek, Inagua, Bahamas	Present study
2	–9.4	0.7	2.9	0.5	4	RAAS, Nicaragua	Present study
3	–7.7	0.1	5.6	0.01	2	St. Joe Bay, Florida, USA	Present study
4	–6.3	0.1	3.0	0.1	2	Tobacco Reef, Belize Barrier Reef, Belize	Abed-Navandi & Dworschak (2005)
5	–7.2	0.3	2.1	0.4	12	Florida Keys Nat'l Marine Sanctuary, USA	Anderson & Fourqurean (2003)
6	–8.4	0.3	2.2	0.2	12	Florida Keys Nat'l Marine Sanctuary, USA	Anderson & Fourqurean (2003)
7	–10.4	0.4	1.1	0.2	12	Florida Keys Nat'l Marine Sanctuary, USA	Anderson & Fourqurean (2003)
8	–7.7	0.2	1.7	0.2	12	Florida Keys Nat'l Marine Sanctuary, USA	Anderson & Fourqurean (2003)
9	–7.5	0.4	3.2	0.4	2	Florida Keys, ocean side, USA	Behringer & Butler (2006)
10	–6.9	0.2	2.9	0.1	2	Florida Keys, impacted bay side, USA	Behringer & Butler (2006)
11	–6.5	0.5	2.8	0.4	2	Florida Keys, non-impacted bay side, USA	Behringer & Butler (2006)
12	–10.7	0.2	6	0.3	10	Florida Bay, USA	Fourqurean & Schrlau (2003)
13	–14.1	–	3.2	–	–	Laguna Joyuda, Puerto Rico	France (1998)
14	–13.6	–	3.7	–	1	Schooner Bank, Florida Bay, USA	Harrigan et al. (1989)
15	–11.5	1.6	1.4	0.1	3	Biscayne Bay, Florida, USA	Kieckbusch et al. (2004)
16	–8	0.6	–0.2	0.5	3	Andros & Grand Bahamas Island, Bahamas	Kieckbusch et al. (2004)
17	–8.5	0.3	–0.3	0	4	Jaragua, Dominican Republic	Tewfik et al. (2005)
18	–8.7	0.1	3.1	0.1	4	Barahona, Dominican Republic	Tewfik et al. (2005)
19	–7.3	0.3	2.6	1.0	3	Twin Cays, Belize	Wooller et al. (2003)

LITERATURE CITED

Abed-Navandi D, Dworschak PC (2005) Food sources of tropical thalassinidean shrimps: a stable-isotope study. Mar Ecol Prog Ser 291:159–168

Anderson WT, Fourqurean JW (2003) Intra- and interannual variability in seagrass carbon and nitrogen stable isotopes from south Florida, a preliminary study. Org Geochem 34:185–194

Behringer DC, Butler MJ (2006) Stable isotope analysis of production and trophic relationships in a tropical marine hard-bottom community. Oecologia 148:334–341

Fourqurean J, Schrlau J (2003) Changes in nutrient content and stable isotope ratios of C and N during decomposition of seagrasses and mangrove leaves along a nutrient availability gradient in Florida Bay, USA. Chem Ecol 19:373–390

France R (1998) Estimating the assimilation of mangrove detritus by fiddler crabs in Laguna Joyuda, Puerto Rico, using dual stable isotopes. J Trop Ecol 14:413–425

Harrigan P, Zieman JC, Macko SA (1989) The base of nutritional support for the gray snapper (*Lutjanus griseus*): an evaluation based on a combined stomach content and stable isotope analysis. Bull Mar Sci 44:65–77

Kieckbusch DK, Koch MS, Serafy JE, Anderson WT (2004) Trophic linkages among primary producers and consumers in fringing mangroves of subtropical lagoons. Bull Mar Sci 74:271–285

Tewfik A, Rasmussen JB, McCann KS (2005) Anthropogenic enrichment alters a marine benthic food web. Ecology 86:2726–2736

Wooller M, Smallwood B, Jacobson M, Fogel M (2003) Carbon and nitrogen stable isotopic variation in *Laguncularia racemosa* (L.) (white mangrove) from Florida and Belize: implications for trophic level studies. Hydrobiologia 499:13–23