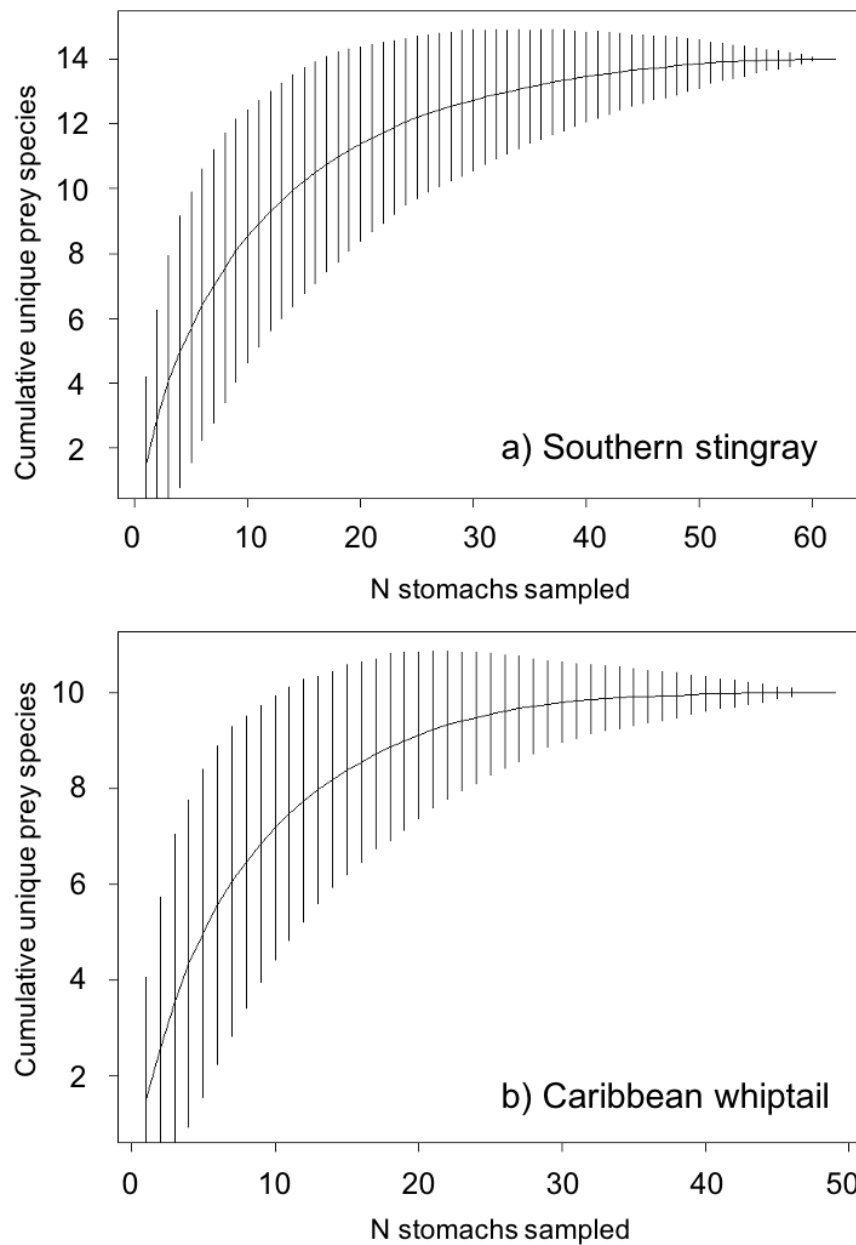
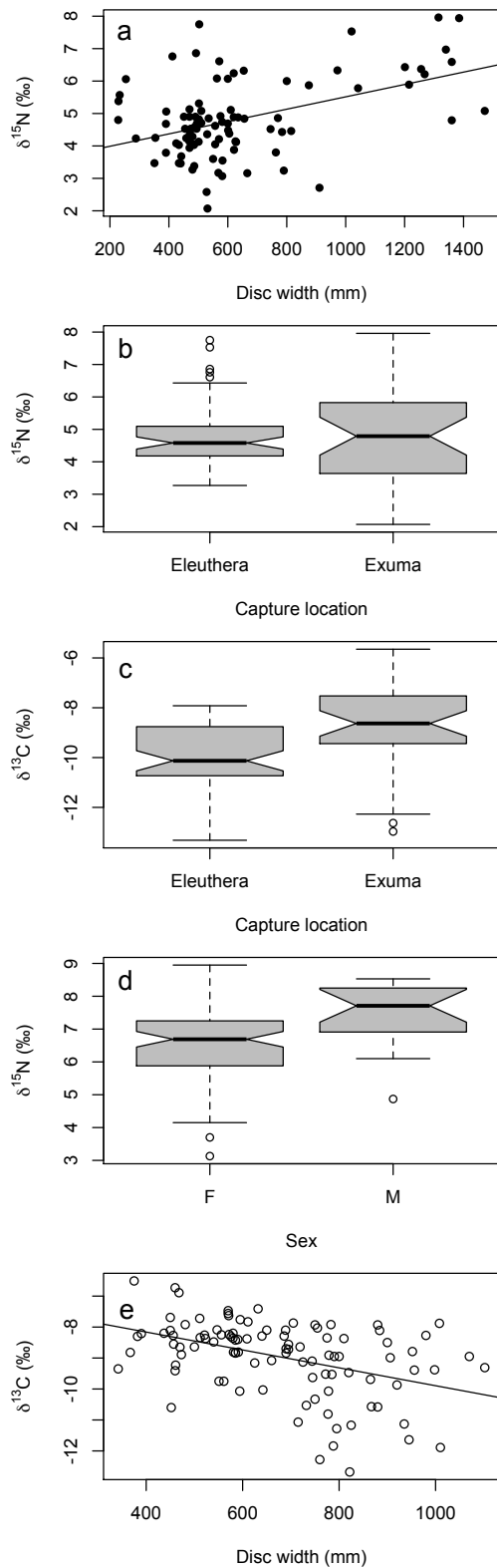


**Figure S1:** Sampling regime and sample numbers of southern stingrays and Caribbean whiptail rays for stable isotope analysis (all samples except ‘gastric lavage’). A subset of 100 ray muscle samples (48 Caribbean whiptail and 52 southern stingrays) were analysed for  $\delta^{34}\text{S}$ .



**Figure S2.** Plots showing the mean cumulative number of unique prey species discovered after sampling stomach contents of a) southern stingrays and b) Caribbean whiptail stingrays. The order in which individuals were sampled was randomised, and the number of cumulative unique prey discovered was resampled 1000 times, and the mean value calculated across runs. Vertical bars denote standard deviation around each mean value. A sufficient number of sampled stomachs is represented with an asymptote in the graphs curve (Ferry et al. 1997).



**Figure S3:** The relationship between stingray disc width (in mm, a, e), capture location (b, c) or sex (d) and  $\delta^{15}\text{N}$  and  $\delta^{13}\text{C}$  isotope values in white muscle of Caribbean whiptail rays (a, b, c) and southern stingrays (d, e), showing variables that significantly predict isotope values (see also Table S1). Parts (b, c and d) are boxplots, where notches indicate statistically significant differences between the two datasets. Lines on (a) and (e) show significant least squared linear regression relationships.

**Table S1:** Linear modelling of factors (sex, season of capture, disc width and Island) that influence the relative importance of Arthropods, Annelid worms, molluscs, sipunculid worms and teleost fish to the diets of southern stingrays and Caribbean whiptail rays as determined from stomach content analysis. Bold text indicates statistical significance. Mollusca was not used in linear modelling for Caribbean whiptail rays because they were no identified in any stomach samples.

|                               | Arthropoda |         | Annelida |         | Mollusca     |                 | Sipunculid |         | Teleost |         |
|-------------------------------|------------|---------|----------|---------|--------------|-----------------|------------|---------|---------|---------|
|                               | F          | p-value | F        | p-value | F            | p-value         | F          | p-value | F       | p-value |
| <b>Southern stingray</b>      |            |         |          |         |              |                 |            |         |         |         |
| Sex                           | 0.576      | 0.455   | 1.992    | 0.171   | 0.044        | 0.835           | 2.661      | 0.116   | 0.010   | 0.919   |
| Disc width                    | 1.231      | 0.278   | 0.112    | 0.741   | 1.657        | 0.210           | 0.417      | 0.525   | 0.746   | 0.397   |
| Island                        | 0.177      | 0.678   | 0.060    | 0.809   | <b>5.624</b> | <b>&lt;0.05</b> | 0.023      | 0.880   | 0.249   | 0.622   |
| <b>Caribbean whiptail ray</b> |            |         |          |         |              |                 |            |         |         |         |
| Sex                           | 0.585      | 0.456   | 1.839    | 0.195   | (-)          | (-)             | 1.266      | 0.278   | 0.780   | 0.391   |
| Disc width                    | 4.359      | 0.054   | 3.429    | 0.084   | (-)          | (-)             | 0.491      | 0.494   | 0.423   | 0.530   |
| Island                        | 0.151      | 0.703   | 1.267    | 0.278   | (-)          | (-)             | 1.295      | 0.273   | 0.084   | 0.777   |

**Table S2:** Linear modelling of factors (sex, season of capture, disc width and Island) that influence isotopic values of  $\delta^{15}\text{N}$ ,  $\delta^{13}\text{C}$  and  $\delta^{34}\text{S}$  from white muscle tissue. Bold text indicates statistical significance. Island was not used in linear modelling for southern stingrays because only two of 112 were caught outside of Eleuthera.

|                           | $\delta^{15}\text{N}$ |                 | $\delta^{13}\text{C}$ |                 | $\delta^{34}\text{S}$ |         |
|---------------------------|-----------------------|-----------------|-----------------------|-----------------|-----------------------|---------|
|                           | F                     | p-value         | F                     | p-value         | F                     | p-value |
| <b>Southern stingray</b>  |                       |                 |                       |                 |                       |         |
| Sex                       | <b>9.67</b>           | <b>&lt;0.01</b> | 0.981                 | 0.324           | 0.269                 | 0.606   |
| Season of capture         | 3.367                 | 0.069           | 1.902                 | 0.171           | 0.417                 | 0.522   |
| Disc width                | 0.014                 | 0.907           | <b>12.137</b>         | <b>&lt;0.01</b> | 0.239                 | 0.627   |
| Island                    | (-)                   | (-)             | (-)                   | (-)             | (-)                   | (-)     |
| <b>Caribbean whiptail</b> |                       |                 |                       |                 |                       |         |
| Sex                       | 0.699                 | 0.405           | 0.014                 | 0.907           | 1.041                 | 0.313   |
| Season of capture         | 3.274                 | 0.074           | 0.332                 | 0.566           | 1.351                 | 0.251   |
| Disc width                | <b>30.112</b>         | <b>&lt;0.01</b> | 1.206                 | 0.275           | 0.923                 | 0.342   |
| Island                    | <b>7.807</b>          | <b>&lt;0.01</b> | <b>7.267</b>          | <b>&lt;0.01</b> | 1.770                 | 0.190   |