

Table S1. The $\delta^{15}\text{N}$ values of amino acids, the $\delta^{15}\text{N}_{\text{Baseline, Phe}}$ values, and the TP for fish and squid investigated in this study. Dash (–): fish is neither compressiform nor fusiform; n.d.: not detectable.

Scientific name	English name	Form	Length (cm)	$\delta^{15}\text{N}$									$\delta^{15}\text{N}_{\text{Baseline, Phe}}$	TP
				Ala	Gly	Val	Leu	Ile	Pro	Ser	Glu	Phe		
<i>Eyynnys japonica</i>	Crimson seabream	Compressiform												
1			15.8	41.4	20.3	33.9	40.4	37.6	41.8	15.4	41.2	19.0	18.1	3.5
2			15.8	40.9	20.8	35.6	40.2	37.9	42.0	18.3	41.2	18.6	17.6	3.5
3			15.8	41.5	19.2	34.0	37.3	36.4	45.9	19.5	42.0	19.2	18.2	3.6
<i>Chelidonichthys spinosus</i>	Bluefin searobin	–	--											
1			25.3	n.d.	14.5	29.1	25.7	30.1	n.d.	n.d.	31.2	8.5	7.4	3.5
2			25.3	n.d.	15.1	27.1	25.0	30.8	n.d.	n.d.	29.1	7.1	6.2	3.4
3			25.3	n.d.	15.1	30.9	25.6	29.6	n.d.	n.d.	29.2	7.8	6.8	3.4
<i>Uraspis helvola</i>	Whitetongue jack	Fusiform												
1			16.7	38.5	14.1	42.4	30.7	34.3	34.6	13.1	37.2	17.5	16.7	3.1
2			16.7	36.0	15.6	47.4	30.2	30.0	32.4	14.4	38.9	19.7	18.8	3.1
3			16.7	34.8	14.6	46.8	37.0	36.7	38.6	12.4	41.8	22.0	21.1	3.2
<i>Stephanolepis cirrhifer</i>	Threadsail filefish	Compressiform												
1			16.2	38.9	16.3	36.0	27.8	26.9	34.6	10.9	37.6	18.5	17.7	3.1
2			16.2	38.0	20.8	38.4	27.2	29.0	36.1	14.6	37.1	19.3	18.6	2.9
3			16.2	36.0	18.7	39.0	32.3	30.2	43.7	11.5	37.1	18.1	17.2	3.1
<i>Psenopsis anomala</i>	Pacific rudderfish	Compressiform												
1			17.1	39.9	13.2	39.9	39.5	38.2	n.d.	n.d.	40.7	20.2	19.3	3.3
2			17.1	38.1	10.5	38.2	38.3	37.9	n.d.	n.d.	40.9	19.4	18.5	3.4
3			17.1	38.0	7.5	40.3	37.7	39.0	n.d.	n.d.	40.3	18.1	17.1	3.5
<i>Pseudopleuronectes yokohamae</i>	Marbled flounder	Fusiform												
1			16.3	34.3	18.1	33.0	28.4	27.9	30.8	n.d.	30.3	12.5	11.7	2.9
2			16.3	27.7	19.1	33.8	24.8	31.3	30.1	n.d.	26.2	8.1	7.4	2.9
3			16.3	30.7	17.7	28.5	32.0	24.8	26.8	n.d.	30.1	10.4	9.6	3.1
<i>Trachurus japonicus</i>	Horse-mackerel	Fusiform												
1			18.6	34.9	6.7	29.6	32.6	29.7	n.d.	n.d.	35.0	14.8	13.9	3.2
2			18.6	31.9	6.3	27.0	27.5	23.8	n.d.	n.d.	29.5	9.9	9.1	3.1
3			18.6	36.6	8.2	32.2	39.6	28.3	n.d.	n.d.	36.7	17.1	16.3	3.1
<i>Pneumatophorus japonicus</i>	Chub mackerel	Fusiform												
1			27.6	38.0	4.9	38.4	34.3	32.0	n.d.	n.d.	34.1	14.9	14.1	3.1
2			27.6	36.0	3.3	32.1	37.1	30.3	n.d.	n.d.	31.9	12.2	11.4	3.1
3			27.6	38.5	2.5	42.4	35.2	29.0	n.d.	n.d.	37.4	17.0	16.1	3.2

<i>Parapristipoma</i>	Chicken grunt	Fusiform												
<i>trilineatum</i>														
1			14.9	32.0	8.3	30.1	31.6	26.3	n.d.	n.d.	33.5	13.5	12.6	3.2
2			14.9	27.4	11.4	25.3	27.1	25.7	n.d.	n.d.	29.7	10.5	9.7	3.1
3	14.9	24.4	12.0	21.9	26.5	23.0	n.d.	n.d.	25.0	5.5	4.6	3.1		
<i>Thamnaconus</i>	Leatherfish	Fusiform												
<i>modestus</i>														
1			26.2	23.5	13.7	28.1	29.8	27.0	n.d.	n.d.	32.2	12.6	11.8	3.1
2			26.2	26.6	18.4	24.1	33.8	25.9	n.d.	n.d.	28.5	9.9	9.1	3.0
3	26.2	30.7	21.0	23.4	31.4	26.6	n.d.	n.d.	30.9	10.4	9.5	3.3		
<i>Cypselurus agoo</i>	Flyingfish	Fusiform												
1			26.2	26.8	3.6	28.8	28.5	29.8	n.d.	8.5	29.4	11.7	11.0	2.9
2			26.2	23.3	6.1	33.7	27.6	30.9	4.0	11.1	27.2	9.0	8.3	2.9
3			26.2	24.4	4.9	34.0	23.7	30.5	3.8	13.5	28.3	10.4	9.6	2.9
<i>Todarodes pacificus</i>	Squid	–												
1			19.9	38.1	4.6	32.9	34.6	28.5	37.4	11.1	33.5	10.1	9.0	3.6
2			19.9	41.1	7.4	32.9	37.8	30.5	37.6	11.8	32.9	10.6	9.6	3.5
<i>Lateolabrax</i>	Seabass	Fusiform												
<i>japonicus</i>														
1			34.7	45.5	12.3	40.8	40.2	35.6	34.3	n.d.	41.0	15.1	13.9	4.0
2			34.7	44.3	13.8	40.3	39.6	35.3	35.8	n.d.	43.2	17.9	16.8	3.9
3	34.7	46.2	13.3	41.0	37.1	33.3	39.3	n.d.	40.0	14.7	13.5	3.9		
<i>Etrumeus teres</i>	Sardine	Fusiform												
1			19.4	30.1	3.9	36.6	30.4	32.0	n.d.	4.3	32.1	12.7	11.8	3.1
2			19.4	32.2	3.8	30.4	30.9	30.5	n.d.	-2.0	32.0	12.9	12.0	3.1
3			19.4	35.0	1.8	39.4	34.0	30.4	n.d.	4.3	35.2	15.5	14.6	3.1

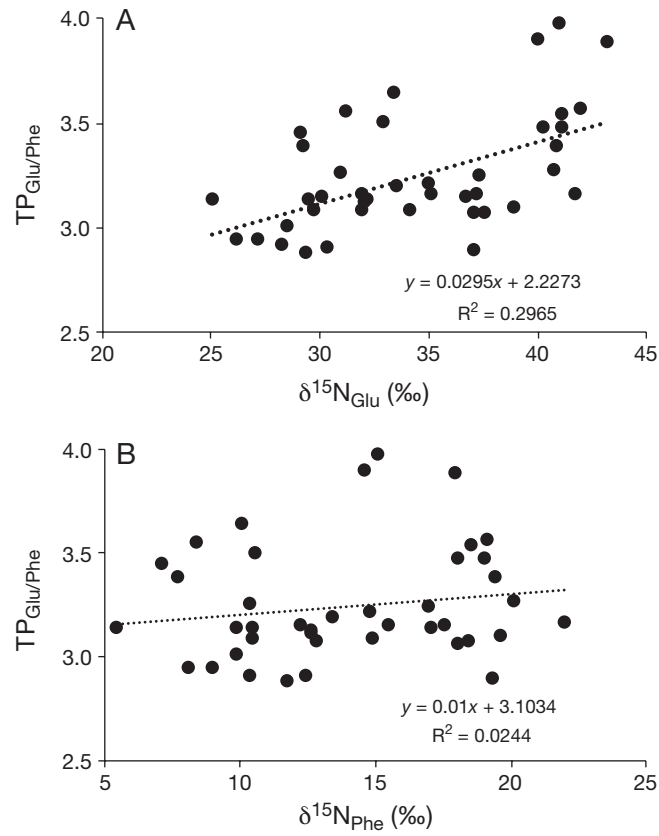


Fig. S1. The relationship of (A) TP_{Glu/Phe} and $\delta^{15}\text{N}_{\text{Glu}}$ and (B) TP_{Glu/Phe} and $\delta^{15}\text{N}_{\text{Phe}}$ for the investigated fish and squid