

Table 1. Stable isotope values of modern Adélie Penguin prey (N = 5) and eggshell

(N = 57). The samples are from three major regions of Antarctica: the Ross Sea, East Antarctica, and the Antarctic Peninsula. Historic eggshell samples (N = 20) from Scott's hut at Cape Evans, dating from between 1911-1917, also are provided.

Specimen	$\delta^{13}\text{C}_{\text{carb}}$	$\delta^{13}\text{C}_{\text{organic}}$	$\delta^{18}\text{O}_{\text{carb}}$	$\delta^{15}\text{N}_{\text{organic}}$
<u>Modern Prey</u>				
<i>Chionodraco hamatus</i>		-24.1		14.8
<i>Gymnodraco acuticeps</i>		-24.1		14.9
<i>Trematomus bernacchii</i>		-18.8		12.6
<i>Euphausia superba</i>		-31.4		5.2
<i>Euphausia superba</i>				4.1
<u>Ross Sea Eggshell</u>				
Edmonson Point-1	-16.8		-7.5	
Edmonson Point-2	-19.7		-6.1	8.6
Edmonson Point-3	-18.6		-8.0	9.5
Edmonson Point-4	-17.9		-6.0	
Edmonson Point-5	-20.2		-6.5	7.4
Edmonson Point-6	-17.1		-7.4	
Edmonson Point-7	-17.3		-7.2	9.6
Edmonson Point-8	-17.6		-5.9	
Edmonson Point-9	-19.2		-5.1	
Edmonson Point-10	-18.3		-6.6	9.1

Table 1 (continued).

Specimen	$\delta^{13}\text{C}_{\text{carb}}$	$\delta^{13}\text{C}_{\text{organic}}$	$\delta^{18}\text{O}_{\text{carb}}$	$\delta^{15}\text{N}_{\text{organic}}$
Cape Hallett-Beach Sample	-19.5	-26.9	-9.4	
Cape Hallett-1	-20.8	-25.1	-8.4	8.7
Cape Hallett-2	-20.0	-25.0	-6.8	8.5
Cape Hallett-3	-19.3		-6.3	
Cape Hallett-4	-20.0	-24.9	-5.0	9.1
Cape Hallett-5	-20.0	-24.1	-6.3	9.7
Cape Hallett-6	-19.5	-24.3	-8.8	
Cape Hallett-7	-20.8		-8.8	
Cape Hallett-8	-20.0	-23.8	-5.6	
Cape Hallett-9	-19.9		-5.9	
Cape Hallett-10	-19.1	-24.4	-6.0	8.6
Inexpressible Island-1	-18.7	-25.2	-6.3	9.5
Inexpressible Island-2	-18.2	-24.6	-7.1	9.3
Inexpressible Island-3	-19.9	-24.5	-5.6	8.9
Inexpressible Island-4	-18.9	-24.2	-6.1	8.9
Inexpressible Island-5	-20.1	-24.6	-7.7	9.5
Inexpressible Island-6	-18.4	-24.8	-7.0	9.1
Inexpressible Island-7	-18.8	-21.6	-6.0	6.8
Inexpressible Island-8	-19.4	-25.2	-8.0	9.3
Inexpressible Island-9	-20.2	-23.9	-8.5	9.6
Inexpressible Island-10	-17.4		-4.9	
<u>East Antarctica Eggshell</u>				
Shirley Island Bag 1	-20.4		-6.6	
Shirley Island Bag 1	-19.0	-24.5	-6.9	

Table 1 (continued).

Specimen	$\delta^{13}\text{C}_{\text{carb}}$	$\delta^{13}\text{C}_{\text{organic}}$	$\delta^{18}\text{O}_{\text{carb}}$	$\delta^{15}\text{N}_{\text{organic}}$
Shirley Island Bag 1	-18.8	-24.9	-4.4	7.0
Shirley Island Bag 1	-21.0	-25.3	-5.9	
Shirley Island Bag 1	-19.0	-24.6	-6.0	5.5
Wilkes Bag 2	-19.7	-25.4	-7.1	7.2
Wilkes Bag 2	-20.1	-25.3	-6.5	7.7
Wilkes Bag 2	-20.5	-25.7	-6.5	
Wilkes Bag 2	-19.5		-5.1	
Wilkes Bag 2	-21.0	-26.5	-6.4	6.8
King George Island	-20.6	-22.3	-5.9	
King George Island	-16.9	-23.0	-6.7	9.2
King George Island	-19.1	-22.8	-6.3	9.1
King George Island	-19.7		-5.6	
King George Island	-19.7	-23.0	-5.2	7.9
King George Island	-18.5	-22.2	-5.8	8.1
Cape Crozier	-19.4	-24.6	-7.6	9.1
Cape Crozier	-20.1	-25.4	-5.7	8.8
Cape Crozier	-20.8	-27.8	-5.2	8.2
Cape Crozier	-19.9	-26.2	-7.0	7.6
Cape Crozier	-19.8	-24.9	-7.6	8.5
Palmer Station	-19.5	-25.3	-5.9	7.8
Palmer Station	-19.5	-24.9	-5.4	7.8
Palmer Station	-19.8	-25.8	-6.2	8.4
Palmer Station	-19.3	-22.6	-7.1	7.3
Palmer Station	-19.4	-25.6	-5.7	7.5

Table 1 (continued).

Specimen	$\delta^{13}\text{C}_{\text{carb}}$	$\delta^{13}\text{C}_{\text{organic}}$	$\delta^{18}\text{O}_{\text{carb}}$	$\delta^{15}\text{N}_{\text{organic}}$
<u>Cape Evans Historic Eggshell</u>				
Cape Evans-1	-19.2		-7.0	9.2
Cape Evans-2	-18.8		-6.3	
Cape Evans-3	-19.8		-6.3	
Cape Evans-4	-18.3		-8.7	10.8
Cape Evans-5	-19.1		-7.8	11.0
Cape Evans-6	-19.1	-25.5	-7.9	9.7
Cape Evans-7	-17.7	-24.7	-9.3	11.2
Cape Evans-8	-19.0		-8.2	9.0
Cape Evans-9	-18.3		-8.4	11.6
Cape Evans-10	-19.6		-7.1	10.9
Cape Evans-11	-18.7	-25.4	-6.8	11.1
Cape Evans-12	-18.3		-9.1	10.2
Cape Evans-13	-19.5		-8.5	10.6
Cape Evans-14	-18.3		-8.0	9.6
Cape Evans-15	-18.5		-5.3	10.1
Cape Evans-16	-19.2		-6.9	
Cape Evans-17	-19.3		-6.0	
Cape Evans-18	-18.9		-7.8	10.2
Cape Evans-19	-19.0		-6.5	9.9
Cape Evans-20	-19.4	-24.6	-6.5	9.1