

A P P E N D I X

Appendix Table A. The regrowth of three species of upright plants at Belle Island, Eniwetok Atoll, from May 22, 1954 to March 15, 1955 following the detonation of May 14, 1954 at a site two and one-half miles away.

Species	Date	Appearance	Height (cm)	Over-all diameter (cm)	Length of largest leaves (cm)
<u>Messerschmidia</u> (No. 1408)	4/15/54	Plant healthy; many flowers			
	5/22	Plant dead; four persistent clumps of leaves	90	90	8 - 10
	6/18	Stems containing many small shoots; plant green	95		
	8/12	Plant healthy; green and bushy; flowers present	95	120	18 - 20
	11/2	Plant healthy	120	120	25
	3/15/55	Plant healthy; some leaves wrinkled or yellow; no flowers observed	150	180	20 - 25
<u>Guettarda</u> (No. 1216)	4/15/54	Plant pale green, wrinkled, with holes; 4 lateral branches	90	55	

Appendix Table A. (continued)

Species	Date	Appearance	Height (cm)	Over-all diameter (cm)	Length of largest leaves (cm)
	5/22/54	Plant burned; no leaves present	45		
	6/18	One green leaf on new shoot near base	45		
	8/12	Ten green leaves near base	18		
	11/2	New shoot healthy; old plant dead	30	30	15
	11/30	New shoot healthy	40		
	3/15/55	Plant not healthy; leaves curled, wrinkled and necrotic	40	25	
Cocos* (No. 1412)	5/22/54	Three spathiform green leaves; others dead	90**		60
	6/19	Plant generally green			82
	8/12	Leaves all green and splitting in normal fashion; plant very healthy			100

* Original plant (No. 1205) destroyed ** Height of tallest dead leaf

Appendix Table A. (continued)

Species	Date	Appearance	Height (cm)	Over-all diameter (cm)	Length of largest leaves (cm)
	9/14/54	Plant healthy			108
	11/2	Plant healthy; 3 large leaves			150
	11/30	Plant healthy; 3 large leaves, one small			150
	3/15/55	One large green leaf; others yellow-green			150

Appendix Table B. The regrowth of four species of prostrate plants at Belle Island, Eniwetok Atoll, from May 22, 1954 to March 15, 1955 following the detonation of May 14, 1954 at a site two and one-half miles away.

Species	Date	Appearance	Size of patch (m)
<u>Boerhaavia</u> (No. 1207)	4/15/54	Plants healthy with a few dead leaves; flowers present	6 x 4
	5/22	Plant mostly dead and burned; a few green leaves on periphery	5.5 x 3.7
	6/18	Plant mostly healthy with a few dead patches; flowers in bud	5.5 x 3.7
	8/12	About the same as in April; many flowers present	
	11/2	Plant healthy; many flowers	This patch converging with other patches
	11/30	Plant healthy; many flowers	
	3/15/55	Plant with some portions dying; mostly healthy	
<u>Triumfetta</u> (No. 1208)	4/15/54	Leaves greenish-yellow; some leaves dead	1.0

Appendix Table B. (continued)

Species	Date	Appearance	Size of patch (m)
	5/22/54	Plant with many dead stems and leaves; some scorched	0.75 diameter
	6/18	Plant healthier; some dead leaves and stems; flowers present	1.5 long
	8/12	Mixture of green and yellow leaves	This patch converging with other patches
	9/9	Plant healthy; patch back to normal size with many flowers	
	11/2	Some yellow leaves present but plant generally healthy; only a few flowers present	
	3/15/55	Many yellow leaves; patch elongated	2.1 long
	5/22/54	Still green but pale; few flowers	0.30 x .25
	6/18	Stems reddish, plant healthy; yellow flowers present	0.7 x 0.7
	8/12	Plant green and healthy; yellow flowers present	0.65 x 0.5
Portulaca* (No. 1211)			

*This plant substituted for No. 1203 which could not be found after detonation

Appendix Table B. (continued)

Species	Date	Appearance	Size of patch (m)
	9/14/54	Healthy, green and full; yellow flowers present	0.8 x .6
	11/2	Same as 9/14	0.7 x .6
	11/30	Same as above	0.9 .6
	3/15/55	Plant mostly brown with few leaves only; no flowers present	
<u>Lepturus</u> (No. 1410)	4/15/54	Plant healthy and green; some dead clumps	1.5 in diameter
	5/22	Plant all brown and dried up	1.5 " "
	6/18	One-fourth of patch green; remainder dead	2.7 " "
	8/12	Plant green on periphery; center mostly brown	2.7 " "
	11/2	Plant green with some dead patches	2.7 " "
	11/30	Plant green with some dead patches	2.7 " "

Appendix Table C. Gross beta radioactivity of the soil samples collected in Area D, Belle Island, Eniwetok Atoll, from April 27, 1954 to November 1, 1955, expressed in thousands of d/m/g of dry soil at time of collection.

Collection date	Thousands of d/m/g	Average
4-27-54*	63.9	88.1
	82.5	
	118.	
5-15-54	45,200	35,500
	66,500	
	49,800	
	27,100	
	25,500	
	20,300	
	27,300	
	34,200	
	28,600	
	28,100	
33,900		
39,300		
5-22-54	6,640	6,420
	6,380	
	7,560	
6-9-54	806	709
	618	
	703	
8-5-54	526	526
9-14	145	145
10-5	97.5	97.5
11-2	115	115
11-30	90.4	90.4
1-18-55	158	158
2-2	45.4	45.4
3-15	102	102
11-1	57.1	57.1

*Collected in Area C

Appendix Table D. - (continued)

Collection Island Date	Stems					Roots	Meat	Milk
	Leaves	Entire	Bark	Internal	Flowers			
<u>Cocos nucifera</u>								
Edna 2-10-55	38.7*							
	.916							
3-8-55	5.49*							
	.796						.798	.539
Henry 4-11-54								
Olive 4-1-54	39.0		26.5	13.8	39.5			
<u>Cordia subcordata</u>								
Leroy 4-27-56	.030							
Olive 4-1-54	241.0	11.6	3.71		12.2			
Vera 3-30-54	29.6	37.5	10.6		41.5			
<u>Fimbristylis cymosa</u>								
Edna 2-10-55							5.17	72.3
Janet 4-4-54	294.0						98.9	

* Dead or scorched

Appendix Table D. -(continued)

Collection Island	Date	Stems									
		Leaves	Entire	Bark	Internal	Flowers	Fruits	Tops	Roots	Meat	Milk
<u>Guettarda speciosa</u>											
Henry	4-11-54	22.4	18.0				1.55				
Janet	4-4-54	99.6									
		18.4									
		43.1									
<u>Ipomoea tuba</u>											
Edna	2-10-55	4.09									
		1.16									
Janet	4-4-54	147.0	8.73								
Vera	3-30-54	76.9	375.0		2.14						
<u>Lepturus repens</u>											
Clara	4-14-54							25.9	18.2		
Daisy	6-7-54							1,630.0*			
Irene	4-14-54							32.8	3.26		
Olive	4-1-54							91.6	22.2		

* Dead or scorched

Appendix Table D. -(continued)

Collection Island	Date	Leaves	Stems			Flowers	Fruits	Tops	Roots	Meat	Milk
			Entire	Bark	Internal						
<u>Messerschmidia argentea</u>											
Clara	4-14-54	1.74									
	6-7-54	8.18									
Daisy	4-14-54	3.93	2.59		.553	4.09					
Edna	2-10-55	1.41									
		1.51									
		3.43									
	3-8-55	2.40		1.15	.821	1.50					
		1.22									
Gene	4-14-54	7.68							7.25		
Henry	4-11-54	9.41		43.9	3.35	8.74					
Irene	4-14-54	7.05	4.04								
	6-7-54	13.3									
		12.2									
Leroy	4-7-56	.032		23.1	2.80				3.2		
Olive	4-1-54	31.1		19.0	1.66				1.0		
		46.4									
Vera	3-30-54	2.17		16.3	1.62	17.1					
	4-26-56	.031			.009	.028					
<u>Morinda citrifolia</u>											
Henry	4-11-54	24.3	8.61								9.55
Olive	4-1-54	357.0*									

*Dead or scorched

Appendix Table D. - (continued)

Collection Island	Date	Leaves	Stems			Flowers	Fruits	Tops	Roots	Meat	Milk
			Entire	Bark	Internal						
<u>Portulaca oleracea</u>											
Irene	4-14-54	3.45									
		39.4									
Vera	3-30-54	38.8	14.9	13.7	21.0			4.87			
<u>Scaevola sp.</u>											
Edna	2-10-55	1.37									
		1.13			.583						
	3-8-55	2.02									
		1.69	1.26	.62							
Henry	4-11-54	14.2	35.8	1.23			3.06				
Irene	4-14-54	1.96									
Leroy	4-27-56	.027	2.54								
Olive	4-1-54	17.6	1.83	.593			23.1				
		96.4	17.6	2.96			3.19				
		24.6	11.7	4.23			3.83				
Vera	3-30-54	188.0	76.7	5.72							
		48.5	28.8	6.02							
		193.0	64.3	5.34							
	5-16-54	768.0	38.2	46.0	410.0		37.5				
		95.1									
	4-26-56	.031		.109	.016						

Appendix Table D. -(continued)

Collection Island	Date	Leaves	Stems			Flowers	Fruits	Tops	Roots	Meat	Milk
			Entire	Bark	Internal						
<u>Sida falax</u>											
Janet	4-4-54	631.0									
		845.0									
		549.0									
	10-17-55	1.37	.523		.652						
<u>Triumfetta procumbens</u>											
Edna	2-10-55	5.03	11.2				.522				
Irene	6-7-54	23.6	34.0								
		1,450.0*									
Vera	3-30-54	49.0									
	4-26-56	.039									
			26.3		9.8						
							19.9				

*Dead or scorched

Appendix Table E. Gross beta radioactivity of the land plants collected at Eniwetok Atoll, May 1956 to July 1957, expressed in thousands of d/m/g of wet tissue at time of counting.

Collection Island	Date	Counting date	Leaves	Stems		Flowers, Fruits	Tops	Meat	Milk
				Entire	Internal				
<u>Cenchrus echinatus</u>									
Janet	5-19-56	6-16-56					46.5		
	7-5-57	8-23-57					39.8		
							.400		
							.316		
<u>Cocos nucifera</u>									
Leroy	5-12-56	5-31-56						.896	.027
								.747	.029
								.825	.225
								.667	.145
Edna	5-25-56	6-20-56	149.0						
			73.4						
<u>Fimrbystilis cymosa</u>									
Janet	5-19-56	6-16-56					16.0		
	7-1-57	8-21-57					20.3		
							1.86		
							2.09		
<u>Ipomoea alba</u>									
Janet	7-1-57	8-21-57	.396						.078
			.360						.090

Appendix Table E. (continued)

Island	Collection Date	Counting date	Leaves	Stems		Flowers, Fruits	Tops	Meat	Milk
				Entire	Internal				
<u>Messerschmidia argentea</u>									
Belle	9-19-56	10-12-56	8.42						
	7-2-57	8-23-57	8.25						
			.273	.168		.378			
			.261	.210		.369			
Edna	5-25-56	6-20-56	9.20			6.10			
			6.15			5.34			
	7-22-57	8-15-57	.506						
			.570						
Henry	5-12-56	5-29-56	.356						
			.297						
Leroy	5-12-56	5-31-56	.254			.449			
			.271			.348			
Vera	5-6-56	5-29-56	188.0						
			177.0						
<u>Portulaca oleracea</u>									
Belle	7-2-57	8-23-57					.966		
							.600		
Edna	7-22-57	9-22-57					.950		
							.976		
<u>Scaevola sp.</u>									
Belle	9-19-56	10-12-56	7.14						
			6.98						
	7-2-57	8-22-57	.279	.030		.195			
			.303	.141					
Edna	5-15-56	5-29-56	10.6						
		6-20-56	84.9						

Appendix Table E. (continued)

Collection Island	Date	Counting date	Leaves	Stems		Flowers, Fruits	Tops	Meat	Milk
				Entire	Internal				
Henry	5-12-56	5-29-56	.674						
			.658						
Leroy	5-12-56	5-31-56	.365			.404			
			.329			.554			
Vera	5-6-56	5-29-56	102.0			282.0			
			91.6			295.0			
<u>Sida fallax</u>									
Janet	5-19-56	6-16-56	2.40						
			8.63						
	7-1-57	8-21-57	.450						
			.782						
<u>Triumfetta procumbens</u>									
Janet	7-5-57	8-23-57	.230						
			.232						



Figure 4. General view of land plants at Belle Island, Eniwetok Atoll.
(a) On April 15, 1954, before the Nectar detonation.
(b) On May 22, 1954, eight days following Nectar, showing a Scaevola plant (No. 1319) in the foreground.



Figure 5. Messerschmidia plant at Belle Island, Eniwetok Atoll.
(a) Plant No. 1248 showing adventitious buds on May 22, 1954. (b) Close-up view of the same plant on June 18, 1954.

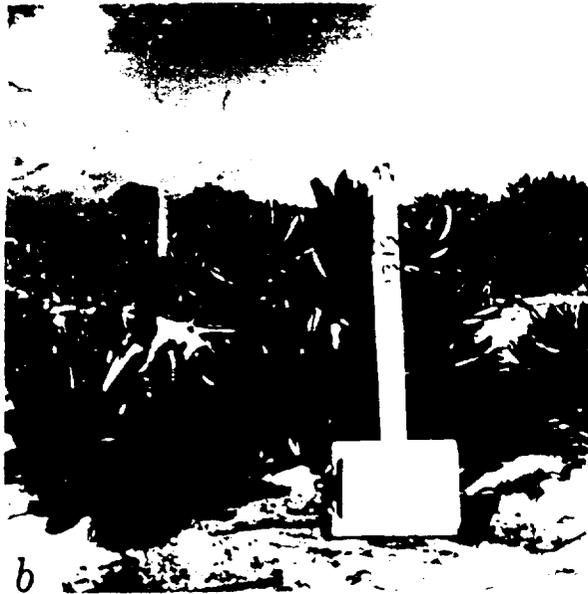


Figure 7. Land plants at Belle Island, Eniwetok Atoll, Area D six months after the Nectar detonation. (a) General view; note healthy appearance of the vegetation. (b) Close-up view of Scaevola (No. 1319).



Figure 8. *Guettarda* plant at Belle Island, Eniwetok Atoll.
(a) Close-up view of unhealthy plant (No. 1216) on
March 15, 1955. (b) Close-up view of the same
plant on November 1, 1955.