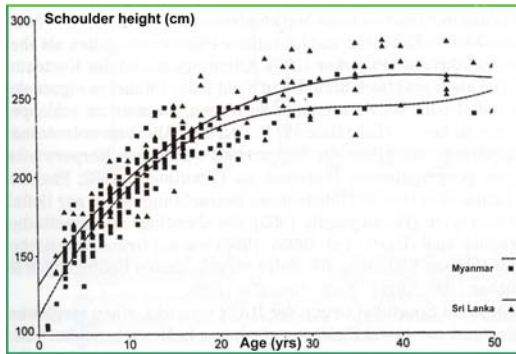


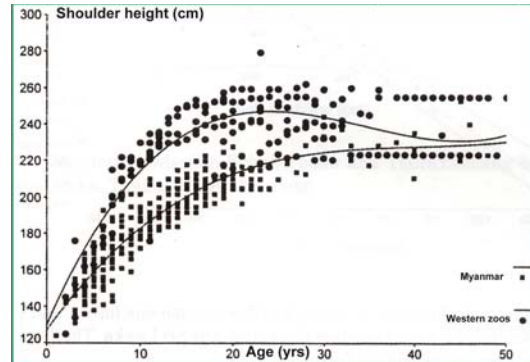
## SIZE, WEIGHT AND AGE CRITERIA IN ASIAN ELEPHANTS Fred Kurt

### 1. Shoulder height

Shoulder height is the vertical distance between ground and the highest point of the shoulder – blade. Bulls grow taller than females. The tallest bulls reach shoulder heights of 310 cm. The tallest females are 280 cm.



Shoulder height of captive bulls in Myanmar & Sri Lanka

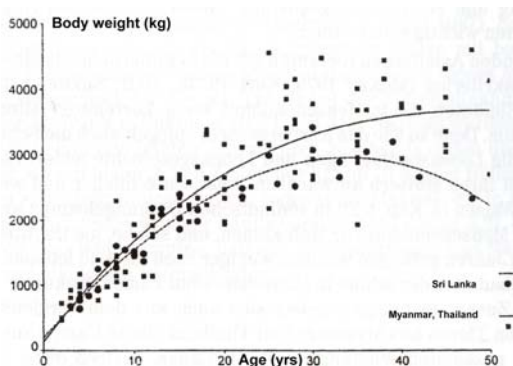


Shoulder height of captive females in Myanmar & Europ. zoos

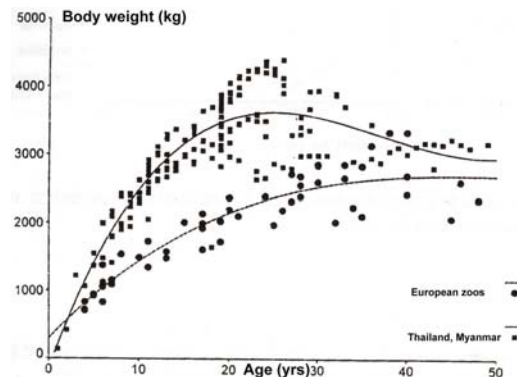
Shoulder height equals the double circumference of a forefoot.

### 2. Body weight

Captive bulls in South Asia reach body weights of 4600 kg and females weight of about 3000 kg.. In Western zoos females are often obese and reach weight of 4200 kg.



Body weight of captive bulls in Myanmar & Sri Lanka



Body weight of females in Europ. Zoos & Thailand/Myanmar



Assessment of body weight (W) by means of body measurements:

S: Shoulder height; T = Thorax circumference (girth)

For elephants up to 6 years :  $W = S^2 \cdot T^2 / 10'000$

For males older than 6 years :  $W = 0,915 \cdot S^2 \cdot T^2 / 10'000$

For females older than 6 years:  $W = 0.982 \cdot S^2 \cdot T^2 / 10'000$

First European Elephant Management School Nov. 2005.  
Fred Kurt: Size, weight and age criteria

Checklist to assess body weights for captive male elephants older than 6 years. Figures are given in 1000 kg.

Girth (in cm) ↓	Shoulder height (in cm)											
	171-180	181-190	191-200	201-210	211-220	221-230	231-240	241-250	251-260	261-270	271-280	281-290
221-230	0.81	0.86										
231-240	0.88	0.94										
241-250	0.96	1.02	1.08									
251-260	1.04	1.10	1.16									
261-270		1.19	1.25	1.32								
271-280		1.28	1.35	1.42								
281-290			1.45	1.52	1.59							
291-300			1.55	1.63	1.71	1.79						
301-310				1.75	1.83	1.92	2.00					
311-320				1.86	1.95	2.04	2.13	2.22				
321-330					2.08	2.18	2.27	2.37				
331-340					2.21	2.31	2.41	2.52	2.62			
341-350						2.45	2.56	2.67	2.77			
351-360						2.60	2.71	2.83	2.94	3.05		
361-370							2.87	2.99	3.11	3.23		
371-380							3.02	3.15	3.28	3.41	3.54	3.67
381-390									3.46	3.59	3.73	3.87
391-400									3.64	3.78	3.93	4.07
401-410										3.98	4.13	4.28
411-420										4.18	4.33	4.49
421-430										4.38	4.55	4.71

Checklist to assess body weights for captive female elephants older than 6 years. Figures are given in 1000 kg.

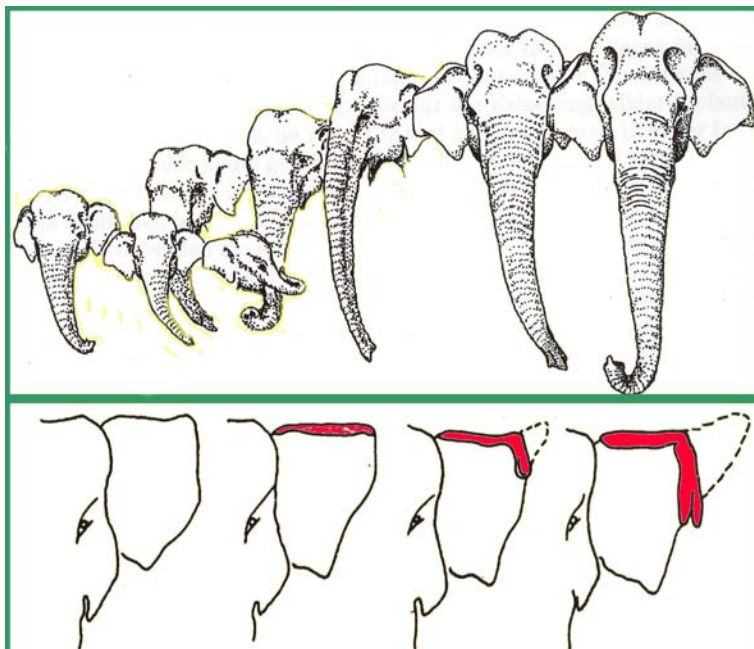
Girth (in cm) ↓	Shoulder height (in cm)											
	141-150	151-160	161-170	171-180	181-190	191-200	201-210	211-220	221-230	231-240	241-250	251-260
201-210	0.60	0.64										
211-220	0.66	0.70	0.75									
221-230	0.72	0.77	0.82	0.87								
231-240		0.84	0.90	0.95	1.00							
241-250		0.91	0.97	1.03	1.09	1.15						
251-260			1.05	1.12	1.18	1.25						
261-270				1.21	1.28	1.35	1.41					
271-280				1.30	1.37	1.45	1.52	1.60				
281-290					1.48	1.55	1.64	1.72	1.80			
291-300						1.67	1.75	1.84	1.92	2.01		
301-310						1.78	1.87	1.96	2.06	2.15		
311-320							2.00	2.10	2.19	2.29	2.39	
321-330							2.13	2.23	2.33	2.44	2.54	
331-340							2.26	2.37	2.48	2.59	2.70	
341-350								2.51	2.63	2.75	2.86	2.98
351-360								2.66	2.79	2.91	3.03	3.16
361-370									2.94	3.07	3.21	3.34
371-380										3.24	3.38	3.52
381-390											3.57	3.71
391-400											3.75	3.91
401-410											3.95	4.11

Checklist to assess body weight of captive juvenile elephants younger than 6 years. Figures are given in kg.

Girth (in cm) ▼	Shoulder height (in cm) ← →						
	121-130	131-140	141-150	151-160	161-170	171-180	181-190
151-160	300						
161-170	340						
171-180	380	410					
181-190		460	500				
191-200		510	550	590			
201-210			610	650			
211-220				720	770		
221-230				790	840	890	
231-240				860	910	970	
241-250					990	1050	1110
251-260					1070	1140	1200
261-270						1230	1300
271-280							1400

### 3. Age criteria

With increasing age, next to body size and weight also a number of body configuration change

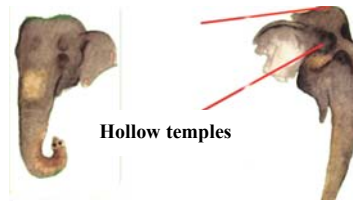


Fold on the upper ear edge becomes wider.

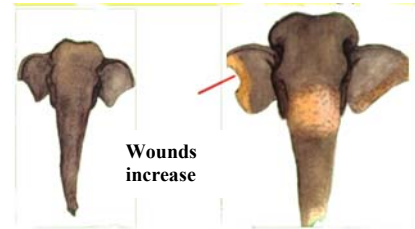
Depigmentation increases



„Helmet „ prominent



Hollow temples



Wounds increase