

PIN#	Specimen ID	Region	Condition
135	B	Squamosal	B
138	B	Maxilla	B
136	B	Palatine	B
142	B	Pterygold	B
137	B	Jugal	B
140	B	Quadratojugal	B
139	B	Suprangular	B
141	B	Pre-frontal	B
144	B	Angular	B
148	B	Spenial	B
143	B	Pre-maxilla	B
145	B	Dentary	B
146	B	Nasal	B
151	B	Frontal	B
153	B	Parietal	B
116	B	Ceratobranchial	B
152	B	Parasphenoid rostrum	B
115	B	Quadrate	B
121	B	Vomer	B
126	B	Exoccipital	B
147	B	Parasphenoid ala	B
150	B	Prootic	B
125	B	Parasphenoid lamina	B
149	B	Opisthotic	B
177	B	Basoccipital	B
187	B	Prearcular	B
134	B	Epiotic	NA
170	B	Articular	NA
172	B	Entoglossum	NA
303	B	Basilhyal	NA
123	B	Urohyal	NA
179	B	Epibranchial	NA
181	B	Sclerital ring	NA
380	B		NA
128	B		NA
156	B		NA
157	B		NA
174	B		NA
183	B		NA
188	B		NA
189	B		NA
190	B		NA
191	B		NA
301	B		NA
305	B		NA
378	B		NA
387	B		NA
132	B		NA
154	B		NA
160	B		NA
376	B		NA
196	B		NA
385	B		NA
130	B		NA
158	B		NA
195	B		NA
382	B		NA
173	B		NA
194	B		NA
381	B		NA
159	B		NA
175	B		NA
193	B		NA
383	B		NA
391	B		NA
192	B		NA
389	B		NA
161	B		NA
197	B		NA
198	B		NA
133			NA
163			NA

**Supple. 1.** Ontogenetic states for ossified elements in *Anas platyrhynchos* specimens, cranial elements, left side. Abbreviations: B, mineralized bone as detected by alizarin red staining; NA, not present; NC, no decision (technical problem); w, bone present, no alizarin uptake.

**Supple. 2.** Ontogenetic states for ossified elements in *Anas platyrhynchos* specimens, cranial elements, right side. Abbreviations as in Supplemental material 1.

**Supple. 3.** Ontogenetic states for ossified elements in *Anas platyrhynchos*, cranial elements. Abbreviations as in Supplemental material 1.

**Supple. 4.** Ontogenetic states for ossified elements in *Anas platyrhynchos*, postcranial elements, left side. Abbreviations as in Supplemental material 1.

	PAUL's taxa 2005c.M									
103	B	B	B	B	Metacarpale unguis	Clavicula				
104	B	B	B	B	Femur					
105	B	B	B	B	Tibiotarsus					
106	B	B	B	B	Radius					
107	B	B	B	B	Ulna					
108	B	B	B	B	Metacarpale manus					
109	B	B	B	B	Scapula					
110	B	B	B	B	Coracoid					
111	B	B	B	B	Ischium					
112	B	B	B	B	Corem					
113	B	B	B	B	Vertebrae					
114	B	B	B	B	1. phalanx of the 1. digit					
115	B	B	B	B	2. vertebrae					
116	B	B	B	B	3. vertebrae					
117	B	B	B	B	4. vertebrae					
118	B	B	B	B	5. vertebrae					
119	B	B	B	B	6. vertebrae					
120	B	B	B	B	7. vertebrae					
121	B	B	B	B	8. vertebrae					
122	B	B	B	B	9. vertebrae					
123	B	B	B	B	10. vertebrae					
124	B	B	B	B	lumbar					
125	B	B	B	B	Pubis					
126	B	B	B	B	1. phalanx of the 2. digit					
127	B	B	B	B	2. phalanx of the 2. digit					
128	B	B	B	B	3. phalanx of the 2. digit					
129	B	B	B	B	caudalid. Centrum					
130	B	B	B	B	caudalve Centrum					
131	B	B	B	B	thorac. Centrum					
132	B	B	B	B	thorac. mid. Centrum					
133	B	B	B	B	thorac. Post. Centrum					
134	B	B	B	B	lumbocare. Centrum					
135	B	B	B	B	lumbocare. 3. digit					
136	B	B	B	B	lumbocare. 4. digit					
137	B	B	B	B	lumbocare. 5. digit					
138	B	B	B	B	lumbocare. 6. digit					
139	B	B	B	B	lumbocare. 7. digit					
140	B	B	B	B	lumbocare. 8. digit					
141	B	B	B	B	lumbocare. 9. digit					
142	B	B	B	B	lumbocare. 10. digit					
143	B	B	B	B	lumbocare. 11. digit					
144	B	B	B	B	lumbocare. 12. digit					
145	B	B	B	B	lumbocare. 13. digit					
146	B	B	B	B	lumbocare. 14. digit					
147	B	B	B	B	lumbocare. 15. digit					
148	B	B	B	B	lumbocare. 16. digit					
149	B	B	B	B	lumbocare. 17. digit					
150	B	B	B	B	lumbocare. 18. digit					
151	B	B	B	B	lumbocare. 19. digit					
152	B	B	B	B	lumbocare. 20. digit					
153	B	B	B	B	lumbocare. 21. digit					
154	B	B	B	B	lumbocare. 22. digit					
155	B	B	B	B	lumbocare. 23. digit					
156	B	B	B	B	lumbocare. 24. digit					
157	B	B	B	B	lumbocare. 25. digit					
158	B	B	B	B	lumbocare. 26. digit					
159	B	B	B	B	lumbocare. 27. digit					
160	B	B	B	B	lumbocare. 28. digit					
161	B	B	B	B	lumbocare. 29. digit					
162	B	B	B	B	lumbocare. 30. digit					
163	B	B	B	B	lumbocare. 31. digit					
164	B	B	B	B	lumbocare. 32. digit					
165	B	B	B	B	lumbocare. 33. digit					
166	B	B	B	B	lumbocare. 34. digit					
167	B	B	B	B	lumbocare. 35. digit					
168	B	B	B	B	lumbocare. 36. digit					
169	B	B	B	B	lumbocare. 37. digit					
170	B	B	B	B	lumbocare. 38. digit					
171	B	B	B	B	lumbocare. 39. digit					
172	B	B	B	B	lumbocare. 40. digit					
173	B	B	B	B	lumbocare. 41. digit					
174	B	B	B	B	lumbocare. 42. digit					
175	B	B	B	B	lumbocare. 43. digit					
176	B	B	B	B	lumbocare. 44. digit					
177	B	B	B	B	lumbocare. 45. digit					
178	B	B	B	B	lumbocare. 46. digit					
179	B	B	B	B	lumbocare. 47. digit					
180	B	B	B	B	lumbocare. 48. digit					
181	B	B	B	B	lumbocare. 49. digit					
182	B	B	B	B	lumbocare. 50. digit					
183	B	B	B	B	lumbocare. 51. digit					
184	B	B	B	B	lumbocare. 52. digit					
185	B	B	B	B	lumbocare. 53. digit					
186	B	B	B	B	lumbocare. 54. digit					
187	B	B	B	B	lumbocare. 55. digit					
188	B	B	B	B	lumbocare. 56. digit					
189	B	B	B	B	lumbocare. 57. digit					
190	B	B	B	B	lumbocare. 58. digit					
191	B	B	B	B	lumbocare. 59. digit					
192	B	B	B	B	lumbocare. 60. digit					
193	B	B	B	B	lumbocare. 61. digit					
194	B	B	B	B	lumbocare. 62. digit					
195	B	B	B	B	lumbocare. 63. digit					
196	B	B	B	B	lumbocare. 64. digit					
197	B	B	B	B	lumbocare. 65. digit					
198	B	B	B	B	lumbocare. 66. digit					
199	B	B	B	B	lumbocare. 67. digit					
200	B	B	B	B	lumbocare. 68. digit					
201	B	B	B	B	lumbocare. 69. digit					
202	B	B	B	B	lumbocare. 70. digit					
203	B	B	B	B	lumbocare. 71. digit					
204	B	B	B	B	lumbocare. 72. digit					
205	B	B	B	B	lumbocare. 73. digit					
206	B	B	B	B	lumbocare. 74. digit					
207	B	B	B	B	lumbocare. 75. digit					
208	B	B	B	B	lumbocare. 76. digit					
209	B	B	B	B	lumbocare. 77. digit					
210	B	B	B	B	lumbocare. 78. digit					
211	B	B	B	B	lumbocare. 79. digit					
212	B	B	B	B	lumbocare. 80. digit					
213	B	B	B	B	lumbocare. 81. digit					
214	B	B	B	B	lumbocare. 82. digit					
215	B	B	B	B	lumbocare. 83. digit					
216	B	B	B	B	lumbocare. 84. digit					
217	B	B	B	B	lumbocare. 85. digit					
218	B	B	B	B	lumbocare. 86. digit					
219	B	B	B	B	lumbocare. 87. digit					
220	B	B	B	B	lumbocare. 88. digit					
221	B	B	B	B	lumbocare. 89. digit					
222	B	B	B	B	lumbocare. 90. digit					
223	B	B	B	B	lumbocare. 91. digit					
224	B	B	B	B	lumbocare. 92. digit					
225	B	B	B	B	lumbocare. 93. digit					
226	B	B	B	B	lumbocare. 94. digit					
227	B	B	B	B	lumbocare. 95. digit					
228	B	B	B	B	lumbocare. 96. digit					
229	B	B	B	B	lumbocare. 97. digit					
230	B	B	B	B	lumbocare. 98. digit					
231	B	B	B	B	lumbocare. 99. digit					
232	B	B	B	B	lumbocare. 100. digit					
233	B	B	B	B	lumbocare. 101. digit					
234	B	B	B	B	lumbocare. 102. digit					
235	B	B	B	B	lumbocare. 103. digit					
236	B	B	B	B	lumbocare. 104. digit					
237	B	B	B	B	lumbocare. 105. digit					
238	B	B	B	B	lumbocare. 106. digit					
239	B	B	B	B	lumbocare. 107. digit					
240	B	B	B	B	lumbocare. 108. digit					
241	B	B	B	B	lumbocare. 109. digit					
242	B	B	B	B	lumbocare. 110. digit					
243	B	B	B	B	lumbocare. 111. digit					
244	B	B	B	B	lumbocare. 112. digit					
245	B	B	B	B	lumbocare. 113. digit					
246	B	B	B	B	lumbocare. 114. digit					
247	B	B	B	B	lumbocare. 115. digit					
248	B	B	B	B	lumbocare. 116. digit					
249	B	B	B	B	lumbocare. 117. digit					
250	B	B	B	B	lumbocare. 118. digit					
251	B	B	B	B	lumbocare. 119. digit					
252	B	B	B	B	lumbocare. 120. digit					
253	B	B	B	B	lumbocare. 121. digit					
254	B	B	B	B	lumbocare. 122. digit					
255	B	B	B	B	lumbocare. 123. digit					
256	B	B	B	B	lumbocare. 124. digit					
257	B	B	B	B	lumbocare. 125. digit					
258	B	B	B	B	lumbocare. 126. digit					
259	B	B	B	B	lumbocare. 127. digit					
260	B	B	B	B	lumbocare. 128. digit					
261	B	B	B	B	lumbocare. 129. digit					
262	B	B	B	B	lumbocare. 130. digit					
263	B	B	B	B	lumbocare. 131. digit					
264	B	B	B	B	lumbocare. 132. digit					
265	B	B	B	B	lumbocare. 133. digit					
266	B	B	B	B	lumbocare. 134. digit					
267	B	B	B	B	lumbocare. 135. digit					
268	B	B	B	B	lumbocare. 136. digit					
269	B	B	B	B	lumbocare.					

**Supple. 7.** Ontogenetic states for ossified elements in *Anas platyrhynchos*, complete skeletons. Abbreviations as in Supplemental material 1.

PIMUZ lab#2009CM	Squammosal	Pre-frontal	Nasal	Pre-maxilla	Maxilla	Palatine	Pterygoid	Jugal	Quadratojugal	Dentary	Supraangular	Angular	Ceratobranchial	Exoccipital	Parasphenoid rostrum	Frontal	Quadratae	Prootic	Praearticular	Basioccipital	Parasphenoid lamina	Parasphenoid ala	Parietal	Vomer	Scleral ring	Opistotic	Supraoccipital	Epiotic	Splenial	Articular
326	B																													
355	B																													
349																														
512																														
502																														
505																														
515																														
514	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	NA						

**Supple. 8.** Ontogenetic states for ossified elements in *Coturnix coturnix japonica*, cranial elements. Abbreviations as in Supplemental material 1.

**Supple. 9.** Ontogenetic states for ossified elements in *Coturnix coturnix japonica*, postcranial elements. Abbreviations as in Supplemental material 1.

PLNUZ_ISP209CM	Specimen	Stomatossal	Pre-dental	Nasal	Pre-maxilla	Maxilla	Palaene	Pterygoid	Jugal	Quadratojugal	Dentary	Supraangular	Angular	Cavicle/furcula	Humerus	Radius	Ulna	Metacarpale	Femur	Tibiotarsus	Metatarsale	Coracobranchial	Frontal	Quadratale	Scapula	Ilium	Pubis	Bizygomatic	Paraphenoid lamina	Paraphenoid ala	Parietal	Vomer	Scleral ring	Opisthotic	Cervical centrum	Thoracic centrum	Synsacral transverse process	Caudal neural arches	Pygostyle	Processus uncinatus	Serratus	Sternum	Patella
355																																											
445																																											
512																																											
505																																											
502																																											
515																																											
514																																											

**Supple. 10.** Ontogenetic states for ossified elements in *Coturnix coturnix japonica*, complete skeletons. Abbreviations as in Supplemental material 1.

	specimen	Femur	Humerus	Radius	Tibia/Fibula	Ulna	Metatarsal	Supraangular	Pterygoid	Dentary	Premaxilla	Maxilla	Palatine	Paraphenoid rostrum	Quadratojugal	Squamosal	Ceratobranchial	Metacarpal	Nasal	Scapula	Vomer	Coracoid	Furcula	Ribs	Splenial	Exoccipital	Paraphenoid ala	Basioccipital	Frontal	Parietal	Quadratale	Phalanges manus	Phalanges pes	Cervical vertebrae	Ilium	Pubis	Cervical vertebrae	Ischium	Thoracal vertebrae	Caudal vertebrae	Synsacral Vertebrae
2008.132_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.50_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.49_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.79_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.34_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.127_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.33_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.77_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.76_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2009.26_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.51_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2008.52_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			
2009.23_CM	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B			

**Supple. 11.** Ontogenetic states for ossified elements in *Taeniopygia guttata*, complete skeletons. Abbreviations: B, mineralized bone as detected by alizarin red staining; ?, missing data.