

Supplementary Dataset 1. Embryo staging, based on (Dufaure and Hubert, 1961), adjusted for veiled chameleon-specific developmental features.

Stage (Dufaure and Hubert, 1961)	Description
<i>Gastrulation</i>	
7	The embryo is mostly circular. The blastopore forms a canal, with the posterior end elevated over the plane of the embryo on the ventral side. The ventral opening is to the anterior, appears concave and relatively narrow. The dorsal opening of the blastopore is also narrow. The dorsal blastoporal lip is concave, with the opening towards the posterior, reminiscent of letter “C”.
7+	The embryo elongates slightly and appears ovoid. The blastopore opening broadens, and the posterior blastoporal lip becomes reminiscent of letter “M”.
<i>Neurulation</i>	
8	Prechordal plate appears and can be distinguished as a slight anterior invagination on the ventral side. Ventrally, the blastopore has a wide concave rectangular opening towards the anterior. On the dorsal side the blastopore is concave, with the opening towards the posterior. The overlap between the ventral and dorsal lips of the blastopore narrows.
10	The blastopore opening has migrated and is open dorso-ventrally. The axial mesoderm is distinct, with mesodermal groove beginning to form. Early evidence for the formation of the head process and the foregut in the anterior.
11	The blastopore opening is closing and becomes reminiscent of a slit. The mesodermal groove is distinct. The head process and the foregut in the anterior are becoming more prominent.
16	2 somite pairs. The head process and the foregut in the anterior are becoming further distinct. On the dorsal side, neural folds are formed. The blastopore opening is closing, and the posterior tissue becomes elevated over the blastopore.
17	3 somite pairs. The foregut pocket and the head prominence are fully formed
18	4 somite pairs. The cephalic region is starting to tilt to embryo’s right.

DUFAURE, J. P. & HUBERT, J. 1961. Table de développement du lézard vivipare: *Lacerta (Zootoca) vivipara* Jacquin. *Archives Anatomie Microscopie Morphologie Experimental*

50, 309-328.

Supplementary Dataset 2. Veiled chameleon RNA *in situ* hybridization probe sequences

>Nodal1

TCTGGCTGAGGTTTCGACTTCACCTGCCCAGTTCTGGAGAGAAATCTACCTTTAACAG
TGCCCCAATGTGGGTAGACCTGTATCACCAGCAGGAAATCCATTGCTCAAGTGGTCA
CAACTGCCACACATTGTTACATAGGCTCTTTTGAAGCGCCTCCATCATTGCCTTCA
AGCTGGATAGTTCTGGAAGTCACGGAACAGCTCTCAAAGTGGGTAGTGAACAGCAG
CTTAGTGGAGGAATCTATTTCAGAAAACCTCTAAGTGAGGAACACCAGCATAGCAAAC
ATTTGCCAAAGCAAGCAACAAGTTACTGTGGATCTATAGATAGAAAGGCATTCTTAG
TGCTTTTCTCTAGACTTTCCAAAGAAGAGAAAGAAAGAAATAGCTCAACTTTGCTCC
AGATAGTGAAAGACTCAAAATATCTTACACTGAAGAATCCAAAAGATGTGGTACCT
GTTTCGGGAACAAAGAGGTATCGGCGCCACAAGAACTCCAAGGCTGGTCTTTAAT
GAGTTTGAAAGAACTCAAGGTCGAAAACCTATGCCATAGAGTGGACTTCTATGTTGA
TTTTGAGGAGATAGGCTGGGGCTCCTGGATTATATACCCCAAGAGATATAATGCCTA
CCGCTGCGAGGGCATGTGTCCTA

>Nodal2

ACCTCGTCCTTCTCGTAGTAAAGCATGGAGAGTGGGCTCAATTTGACTGGAGCGCAG
GCTAGGCAAGGCACCCGTTGGGTTGGTAGAACTTCAGCAAGCTCTGCATATATGCA
TGGTTGGTTGGCTTAAAGGTTTCATCCACAGGTGTTGGGCACTCCCCCTCACAACGG
TATGCATTATACTTCTTGGGATGTAGGATCCACATTCCAAAACCACTCTTCTCAAAG
TCCACAATCATATCAACTCTCTTGCACAGGGATTTATTTTCTTCAGCAAAGCCAAGC
ACGTCAGCGTCGCTCCCTTTGATCCTTTTCCTTTGCTTCCTGTTCCGTCGGTGCCTTCG
GCCCCCTGGGCTCTTTGTGTGCGTCATCTGACATGACGTATTTGGACATCTCTACCACC
CTGATGAGACTTGATCTCTGATAGGGTTCCATCTGTTCTTTATCTTTGGAGAAGATAA
CCAGAAGGACTTGTTCTTTTCCTGCTCTGCAACGGTACTTCTGGGGTTGGACTGAAGT
CACAGATGTTCTCAAACCCATTGGTGGGGCATCCACTGGTTCCTTCGTCATTGCCATT
ATCTAGGCAATTTGCAGTCCATTTCCTGCTCCTGAACATCTAGGGTATCGTGACCTGA
G

>Lefty

GTTTCCCTTCTTGACAAGGTACATCATGGGAAGTGGGGAACTTTCCACCACAGCACA
GTTTCTCTCTCCATAGCCAAAATGCCGCAACCAGTTCTTGGGTTGCCGGCAGCAACC
CATACAGTGGTAAGCCTGATAGCCAGCTGGCTCAATAATCCAATATTGAGTCCAAGT
TAACTCTCGGAAATTGATGTAATGTTCTTGCCGGCAGCAGGTGGTTTTGTCCGTTGAT
GCACCTTCTTTACAGTCTCCAGGTCCTCCATACTCTTCCAAGTTTATTGTATAAAGCA
CTAACTCAGGCTTGCCCAACGTCTTATCGGAGGGGTCCTGAGAAGTAAAGCGCACA
ACTCTGGCCATTTCTGAGGCATAGTTGCCTATTCTTTCTCCTTCAATCCAGACCTCCA
GAAGCATTGGCCCAGTTTTCTTCACTTTAAGCCAAAAATGTACAGCCTGGGTGACAT
CAAAATTCTTCCAGCCAGATTCCATAATTGGGACCAATCTGGAATCAATCAAAGTAG
TCCGGTTGGTTCCATTATCTCCAAGCTCTACCCAGTAGATGCTCACCCGGGCATTCA
AGACGGGTCTTTGAGATTGCCTGCTGGGCAGGTTTTTTATATCCAGGGGCTTCTTGA
AAAGTTTCAGCTCAGCCAT

>Cer1

CTGCAAACATCCTGGTACATTTTCATTGATCTTGATTGGAAGGACAATCTCTTCAGAC

CTTGATTTGGTTTTTCAACATGAACAGATCCCAGAACTTCTTGGCATCTTTTCGGAAGA
CCAGGTTTGCCTTTCTCTTAGCGTGCTGATGCGGAGGATGGTTTGAGGGGGTTTCTG
GGTATGAAGGTGGATCTGTGGGAATCCAGCTTTCCAAATCCTGAGCCATATGGCCAC
CAACATGTGGGAAAATTGTCCTGGACACTTCAGGTTTCATCTTGTGTCTTGCTCTCTGT
TTCTGCCAAGACAGCTGCCACAAACGGATCAGGCTGTGCCAGATACCTCACTAACA
AATCCTGAGGCAACTCCCGACTTTGTTCTGCTCTCTCAGGCCATGAAATCAGCAGCA
ACAAATACAAGATGCAGGCCTTG

>*Pitx2*

GGATCCGTCCAAGAAGAAGAGGCAGCGGCGGCAGCGCACGCACTTCACCAGCCAGC
AGCTCCAGGAGCTGGAAGCCACCTTCCAAAGGAACCGCTACCCGGACATGTCGACG
CGGGAGGAGATCGCCGTCTGGACCAACCTCACCAGAGGCCCGAGTCAGGGTGTGGTT
CAAGAACCGCCGGGCCAAGTGGCGGAAGCGGGAACGGAACCAGCAGGCGGAGCTG
TGCAAGAACGGCTTCGGGGCCGCAGTTCAACGGCCTGATGCAGCCTTACGACGACAT
GTACCCGGGGCTACTCGTACAACAACCTGGGCGGCCAAGGGCCTGACGTCGGCCTCGC
TCTCCACCAAGAGCTTCCCCTTCTTCAACTCCATGAACGTCAACCCGCTCTCGTCGCA
GAGCATGTTCTCGCCGCCCAACTCCATCTCGTCCATGAGCATGTCTTCCAGCATGGT
CCCCTCGGCCGTGGCCGGCGTCCCGGGCTCGGGCCTCAACAGCCTCAACAACTTGAA
CAACCTGAGCAACCCTTCGCTCAACTCGGCCGTGCCACGCCCCGCTGCCCTTACGC
CCCGCCGACCCCTCCTTACGTTTACCGGGACACGTGTAACCTCCAGCTTGGCCAGCCT
GAGACTCAAAGCCAAGCAGCACT

>*Shh*¹

TCCGGCTTCGACTGGGTCTATTACGAGTCCAAGGCTCACATCCACTGCTCGGTCAA
GCCGAGAACTCAGTGGCAGCCAAATCCGGTGGCTGTTTCCCCGGAACAGCCTGGGT
GAACCTGGAGCAAGGAGGAACCAAGCTGGTGAAGGACCTCAACCTGGAGACCGG
GTTTTGGCAGCGGACACCCAGGGCCGCCTGCTCTTCAGTGAATTCCTCACCTTCCTG
GACCAAGAGGAGGCCCCGATCCACAAACTCTTCTATGTCATTGAGACCCAAAGGCC
CCGGACACGTCTCTTGCTGACGGCGGCCACCTACTCTTTGTGGCCTCACCCCAGAA
CCAGTCTCAACCCCAGCCATTTTTGCCAGCCGTGTACAGCCAGGACAACATATCTA
CGTGCTCAGCCAAGGAGGTCAGACACTGCTAGAAGCTGCAGTGCACCGGGTTTCCC
TGCAAGAGGAAGCTTTGGGGGCCTACGCCCCACTGACCGCCCATGA

>*Chordin*

CATACCCTATGGGAGAGATCCAAGGGAAGATTATCAAGCATCGGGGCCCTCTTTGCA
GAAACATTGAGTGCCCTCCTGACATCTGCGGACCCAACCCACCTTGGCATGGGTGGC
ATTGCTATGCTTACCTTGAGTGACACAGAGAACAACCTACATTTTGTCTAGTGACC
AGGGGGCTTTTGGAGCCAGCTGACAAAAAATCCTCCTCGCTCCCCTTGAGGGTACAA
ATCCTGCACCAGGACAGAGTTCTGAGGGGAATGCTTGCCAATGTTACCTTGCAGGCC
TCTGACTTCGCAGAAGTGCTGACTGGACTTGGAAGTGAAGAGATGCAGTGGCTGGC
CCACGGGGCATTGAGGATTACAGCAGAGGTGGAGGGGGAATTCAGGCGCCAGATTG
CTGGACAGATCACCCCAAGGAGAAGTTGTGACACCCTACAAAGTGTGCTTTGTGGA
GGAGATGCTTTGATACCGACCCAGACAG

>*Fgf8*¹

TCTAGTGC GGACCTACCAGCTGTACGGTCGGACCAGTGGGAAGCACGTGCAAATTCT
GGACAACAAGAAAATCAATGCCTTGGCAGAGGATGGAGACGCTCACGCCAAGCTCA
TTGTGGAGACTGACACCTTTGGAAGCCGAGTAAGAATCAAGGGTGCTGAAACTGGC
TTCTATATCTGCATGAACAAGAAAGGAAAGCTGATTGGCAAGAGCAATGGCAAAGG
CAAGGACTGTGTCTTTACAGAGATTGTGTTGGAGAACAACCACACAGCACTGCAGA
ATGCCAAGTATGAAGGGTGGTACATGGCCTTCACCCGAAAGGGGCGCCCCCGCAAA
GGCTCCAAGACTCGTCAACATCAACGTGAGGTGCACTTCATGAAGCGCTTA

>*FoxJ1*

CATTAGGCACAACCTCTCCTTGAACAAGTGCTTCATCAAAGTCCCACGAGAGAAGG
ATGAACCAGGAAAAGGTGGCTTCTGGAAAATTGACCCTCAGTATGCTGACAGACTG
ATGAACGGGGCATTCAAGAAGCGCAGGATGCCTCCAGTGCAAATCCATCCGGCTTT
CAGTGGACGAATGCAACAGGATGCCTGCTCCAGTTCTTCTGCTCAGCAGGCTGCAAT
CTCTTGGAAAAACAATGGCATCCTAAAAATCAACATGGAGTCTCAGCAGCTACTCA
AAGAATTTGAAGAAGTCACTAGTAGTGATCAAACTGGAATCCAGCAGTGGATGGG
AAAATGAGCCATAAACGTAAGCAGCCTTTGCCAAAACGGATGTACAAGACTGCCCG
CCTCTCCAGCTCTCCCATGCTGACACAGGAAGAACAACAGAGCTTGGATCTCTGAA
AGGTGACTTTGATTGGGAAGCTATCTTTGACACCACTTTAAATGCTGATTTTTCCACC
TTTGAAGATTTGGAGATCACGCCTCCTATTAGCCCAATAACCAGGGATGTAGATTTG
ACTGTGCATGGAAGACATATCGATTGCCCACAGGAGTGGTGCCCCACTGGGCAGGA
TTACGTTCTAACAGAGTCCAACCAGAACAGCTTAGACTTTGATGAAACCTTCATTGC
TACTTCTTTCCTCCAGCATCC

>*Dnah11*

CTGCCAGTCTTTTTGAAGTGGTCAGTCCAGATTACAAACAACCTGAAACAGTGTCGCA
AGGAAATAACATTGCTGAAGGGAATGTGGGACATCAATATTTATGCAACAAGTAAC
ATCAGTGATTGGATTAAAAGCCCTTGGAGGGAGATTAGTATGGAGCAGATGGATGC
AGAACTGAGAAGATTTGCAAAGGAGTTGTGGGCACTGGATAAAGAAGTTCGCTCCT
GGAATGTATACACAAATCTGGAACATAACAATTA AAAA ACTTGTTGACATCGTTGAAG
GTTGTTACAGAGTTGCAGAATCCAGCCATGAGGGACAGGCACTGGCATCAGCTGAT
GGATGCAATAGGTATTCAGTTTTCAATAAGTGAAGATACAACATTGGCAGATTTGTT
AGCGCTGAAGCTCCACAAGATGGAAGATGATGTCAGAAACATTGTTGACAAAGCAG
TAAAAGA ACTTGGGATTGAAAAGATTCTCACAGAAATCAACCAAATATGGGCTACA
ATGGAGTTTTGTTATGAAGAGCATTACAGGACCAGTGTTCCCTTTGTTGAAAACAGAT
GAGCACCTTTTTGAGACATTAGACGATAACCAAGTTCAGCTGCAAACAGTTCTGCAA
AGTAAATATGTTGAGTATTTCAATTGAGCAAGTTTCAAACCTGGCAAAAAAAGCTAAAT
ATTGCAGACTCTGTAATTTTTCTTTGGATGGAAGTTCAGCGCACATGGTCTCATCTTG
AAAGCATTTTCATTGG

1 Diaz, R. E., Jr. & Trainor, P. A. Hand/foot splitting and the 're-evolution' of mesopodial skeletal elements during the evolution and radiation of chameleons. *BMC Evol Biol* **15**, 184 (2015).