

MORPHOLOGICAL DESCRIPTIVE COMPARISON AMONG FOSSIL RHINOCEROSSES DISCUSSED IN THE MAIN TEXT

Specimen number	Locality	Age	Species	Reference	Stage	Rear border of the nasal notch	Rear border of the infraorbital foramen	Anterior border of the orbit	Posterior border of the infraorbital foramen	Posterior end of the palata	Continuous bregmal cingulum on the P4	Shape of the nuchal crest (dorsal view)	Shape of the occipital face	Area between the temporal and nuchal crests	Occipital face, lateral view	Postgenital apophysis, cross section	Foreman nervi hypoglossi	Bregmal crest on the basilar process	Nasal bones	Nuchal tubercles
NBAK 4503	Melazzo	MIS5	<i>S. hembachius</i>	Falconer (1868, pl. 23, fig. 1, pl. 24, figs 3-5)	?	?	?	?	?	?	?	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	barely visible	?	absent
NBAK 20013	Northampton	?	<i>S. hembachius</i>	Falconer (1868, pl. 23, fig. 2, pl. 24, fig. 1)	?	?	?	?	?	?	?	slightly concave	subtriangular	flat	straight	subtriangular	?	?	?	absent
NBAK 4302	Rford	MIS7	<i>S. hembachius</i>	Woodward (1874, pl. 1, fig. 1-2, pl. 2, fig. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 4307	Swaincombe	MIS11	<i>S. hembachius</i>	This work	?	?	?	?	?	?	?	slightly concave	subtriangular	flat	straight	subtriangular	?	?	?	absent
NBAK 2738	Clacton	MIS11	<i>S. hembachius</i>	Clayton (1846, fig. 131, 138-140)	?	?	?	?	?	?	?	slightly concave	subtriangular	flat	straight	subtriangular	?	?	?	absent
UF 105	Porto alla Valle	MIS7	<i>S. hembachius</i>	Ligabue (1906, pl. 1, fig. 5, pl. 2, pl. 4, figs 1-2)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
UF 109	Melazzo	MIS5-4	<i>S. hembachius</i>	Ligabue (1906, pl. 1, fig. 4, pl. 2, pl. 4, figs 1-2)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
UF 1072	Poggi	MIS7	<i>S. hembachius</i>	Azzurri (1962, fig. 4-5, pl. 1, fig. 1, 2, fig. 2, pl. 3, fig. 2, pl. 4, fig. 3)	?	anterior of P4	anterior of P4	anterior of P4	anterior of P4	anterior of P4	anterior of P4	probably slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MISCC11769	Melazzo	MIS5-4	<i>S. hembachius</i>	Brandt (1877, pl. 4, fig. 5, pl. 2, pl. 4, figs 1-2)	?	anterior of P4	mid of P4	anterior of P4	anterior of P4	anterior of P4	mid valley of M2	absent	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MPC3303	San Colombano	Late Pleistocene	<i>S. hembachius</i>	Caracciolo (1926, fig. 11, Carataggi (1968, pl. 1-2))	?	anterior of P4	mid of P4	anterior of P4	anterior of P4	anterior of P4	mid valley of M2	absent	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
LIV 189 - HK 88	Neumark Nord	MIS7	<i>S. hembachius</i>	Loose (1967, pl. 4, fig. 3, pl. 4, fig. 3)	?	posterior of P4	mid of P4	anterior of P4	anterior of P4	anterior of P4	mid valley of M2	absent	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 1522	Campagna Romita	MIS13	<i>S. hembachius</i>	Parodi (et al. (2013, fig. 2))	?	posterior of P4	?	posterior of M2	?	?	mid valley of M2	reduced	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MPP VER 099	Tonnesa Silvano	MIS25-23	<i>S. hembachius</i>	Capella-Figini (1976, pl. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 20013	Northampton	?	<i>S. hembachius</i>	Falconer (1868, pl. 23, fig. 2, pl. 24, fig. 1)	?	?	?	?	?	?	?	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 4302	Rford	MIS7	<i>S. hembachius</i>	Woodward (1874, pl. 1, fig. 1-2, pl. 2, fig. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 2738	Clacton	MIS11	<i>S. hembachius</i>	Owen (1846, fig. 131, 138-140)	?	?	?	?	?	?	?	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MIS7 1592	Campagna Romita	MIS11	<i>S. hembachius</i>	Parodi (et al. (2013, fig. 2))	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	straight	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
GRQ-SEPR8026	Cova del Rioconero	MIS5a-5a	<i>S. hembachius</i>	Daura (et al. (2015, fig. 1-4))	?	between P4-M1?	?	mid of M2	?	?	?	regularly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 201302830001	Hundheim	MIS15	<i>S. hembachius</i>	Tobin (1902, pl. 2, figs 1-3, fig. 1-2)	?	between P4-M1?	?	mid of M2	?	?	?	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MPP 32035	Isarria	MIS15	<i>S. hembachius</i>	Saia & Fontana (1993, pl. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK FW 1977-13	Meibach	MIS15	<i>S. hembachius</i>	This work	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK FW 1956-74	Meibach	MIS15	<i>S. hembachius</i>	Loose (1975, pl. 3, fig. 2, pl. 4, fig. 2, pl. 10, fig. 3, pl. 13, fig. 4)	?	between P4-M1	mid of P4	anterior of P2	anterior of P2	anterior of P2	mid valley of M2	reduced	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MPP VER 099	Tonnesa Silvano	MIS25-23	<i>S. hembachius</i>	Capella-Figini (1976, pl. 1)	?	posterior of P4	posterior of P4	between M2-M3	between M2-M3	between M2-M3	between M2-M3	reduced	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK ES. B	Meibach	MIS15	<i>S. hembachius</i>	Loose (1975, pl. 3, fig. 2, pl. 4, fig. 2, pl. 10, fig. 3, pl. 13, fig. 4)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MIS7 1592	Meibach	MIS15	<i>S. hembachius</i>	Loose (1975, pl. 3, fig. 2, pl. 4, fig. 2, pl. 10, fig. 3, pl. 13, fig. 4)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 20090270	Untermaßfeld	MIS13	<i>S. hembachius</i>	Kolbow (et al. (2010, fig. 1))	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 19622513	Sachsenheim	MIS16	<i>S. hembachius</i>	Kuhke (1965, pl. 25, fig. 1-2)	?	between P4-M1	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 1962250	Vogelsiedl	MIS16	<i>S. hembachius</i>	Kuhke (1965, pl. 25, fig. 1-2)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 1962195	Vogelsiedl	MIS16	<i>S. hembachius</i>	Kuhke (1965, pl. 25, fig. 1-2)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 20090270	Untermaßfeld	MIS13	<i>S. hembachius</i>	Kolbow (et al. (2010, fig. 1))	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MIS7 1592	Meibach	MIS15	<i>S. hembachius</i>	Loose (1975, pl. 3, fig. 2, pl. 4, fig. 2, pl. 10, fig. 3, pl. 13, fig. 4)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 19622513	Sachsenheim	MIS16	<i>S. hembachius</i>	Kuhke (1965, pl. 25, fig. 1-2)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 1962250	Vogelsiedl	MIS16	<i>S. hembachius</i>	Kuhke (1965, pl. 25, fig. 1-2)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 1962195	Vogelsiedl	MIS16	<i>S. hembachius</i>	Kuhke (1965, pl. 25, fig. 1-2)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
QW 20090270	Untermaßfeld	MIS13	<i>S. hembachius</i>	Kolbow (et al. (2010, fig. 1))	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MIS7 1592	Meibach	MIS15	<i>S. hembachius</i>	Loose (1975, pl. 3, fig. 2, pl. 4, fig. 2, pl. 10, fig. 3, pl. 13, fig. 4)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
LIV 200-24-241-243	Neumark Nord	MIS7	<i>S. hembachius</i>	van der Meer (2010, pl. 2, fig. 1)	?	anterior of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 4302	Rford	MIS7	<i>S. hembachius</i>	Woodward (1874, pl. 1, fig. 1-2, pl. 2, fig. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 20013	Northampton	?	<i>S. hembachius</i>	Falconer (1868, pl. 23, fig. 2, pl. 24, fig. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 4307	Swaincombe	MIS11	<i>S. hembachius</i>	This work	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 2738	Clacton	MIS11	<i>S. hembachius</i>	Owen (1846, fig. 131, 138-140)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MIS7 1592	Campagna Romita	MIS11	<i>S. hembachius</i>	Parodi (et al. (2013, fig. 2))	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MPP VER 099	Tonnesa Silvano	MIS25-23	<i>S. hembachius</i>	Capella-Figini (1976, pl. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
GRQ-SEPR8026	Cova del Rioconero	MIS5a-5a	<i>S. hembachius</i>	Daura (et al. (2015, fig. 1-4))	?	between P4-M1?	?	mid of M2	?	?	?	regularly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 201302830001	Hundheim	MIS15	<i>S. hembachius</i>	Tobin (1902, pl. 2, figs 1-3, fig. 1-2)	?	between P4-M1?	?	mid of M2	?	?	?	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MPP 32035	Isarria	MIS15	<i>S. hembachius</i>	Saia & Fontana (1993, pl. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK FW 1977-13	Meibach	MIS15	<i>S. hembachius</i>	This work	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK FW 1956-74	Meibach	MIS15	<i>S. hembachius</i>	Loose (1975, pl. 3, fig. 2, pl. 4, fig. 2, pl. 10, fig. 3, pl. 13, fig. 4)	?	between P4-M1	mid of P4	anterior of P2	anterior of P2	anterior of P2	mid valley of M2	reduced	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MS no rock	Maur	MIS16	<i>S. hembachius</i>	Wurm (1912, pl. 1, fig. 1, 5, pl. 2, fig. 1-2)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
LIV 189 - HK 88	Neumark Nord	MIS7	<i>S. hembachius</i>	van der Meer (2010, pl. 2, fig. 1)	?	anterior of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 20013	Northampton	?	<i>S. hembachius</i>	Falconer (1868, pl. 23, fig. 2, pl. 24, fig. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 4307	Swaincombe	MIS11	<i>S. hembachius</i>	This work	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
NBAK 2738	Clacton	MIS11	<i>S. hembachius</i>	Owen (1846, fig. 131, 138-140)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MIS7 1592	Campagna Romita	MIS11	<i>S. hembachius</i>	Parodi (et al. (2013, fig. 2))	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent
MPP VER 099	Tonnesa Silvano	MIS25-23	<i>S. hembachius</i>	Capella-Figini (1976, pl. 1)	?	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	mid of P4	slightly concave	subtriangular	flat	straight	subtriangular	anteriorly placed	?	?	absent