Late Romano-British - early medieval socio-economic and cultural change: Analysis of the mammal and bird bone assemblages from the Roman city of *Viroconium Cornoviorum*, Shropshire: Volume 2: Figures

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Thesis submitted for PhD

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Figure 1. Introduction and background: Location map of *Viroconium* (Chadderton 2002: 2, Figure 1.1)

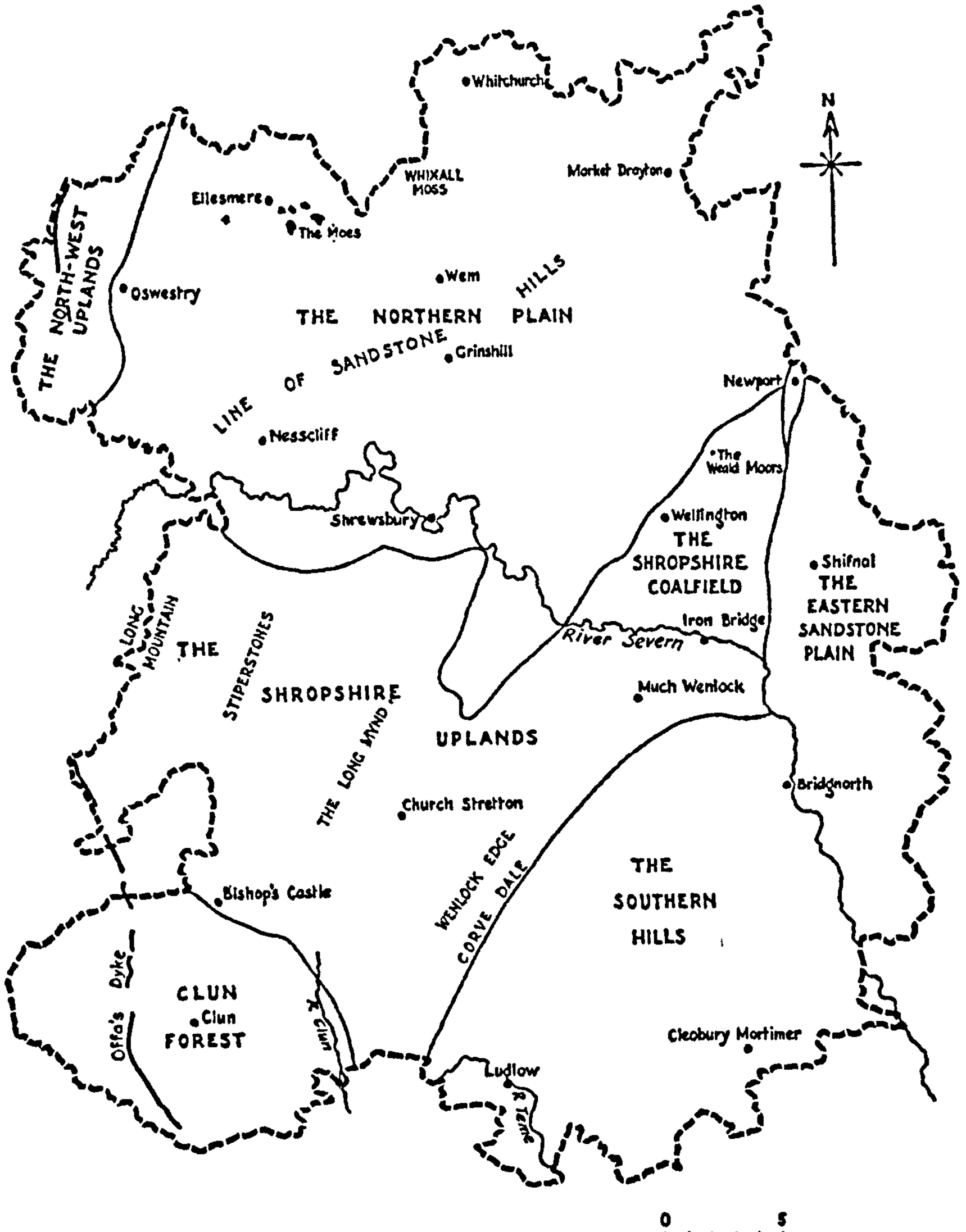

Figure 2. Introduction and background: Topography of Shropshire (Rowley 1972: 23, Figure 1)

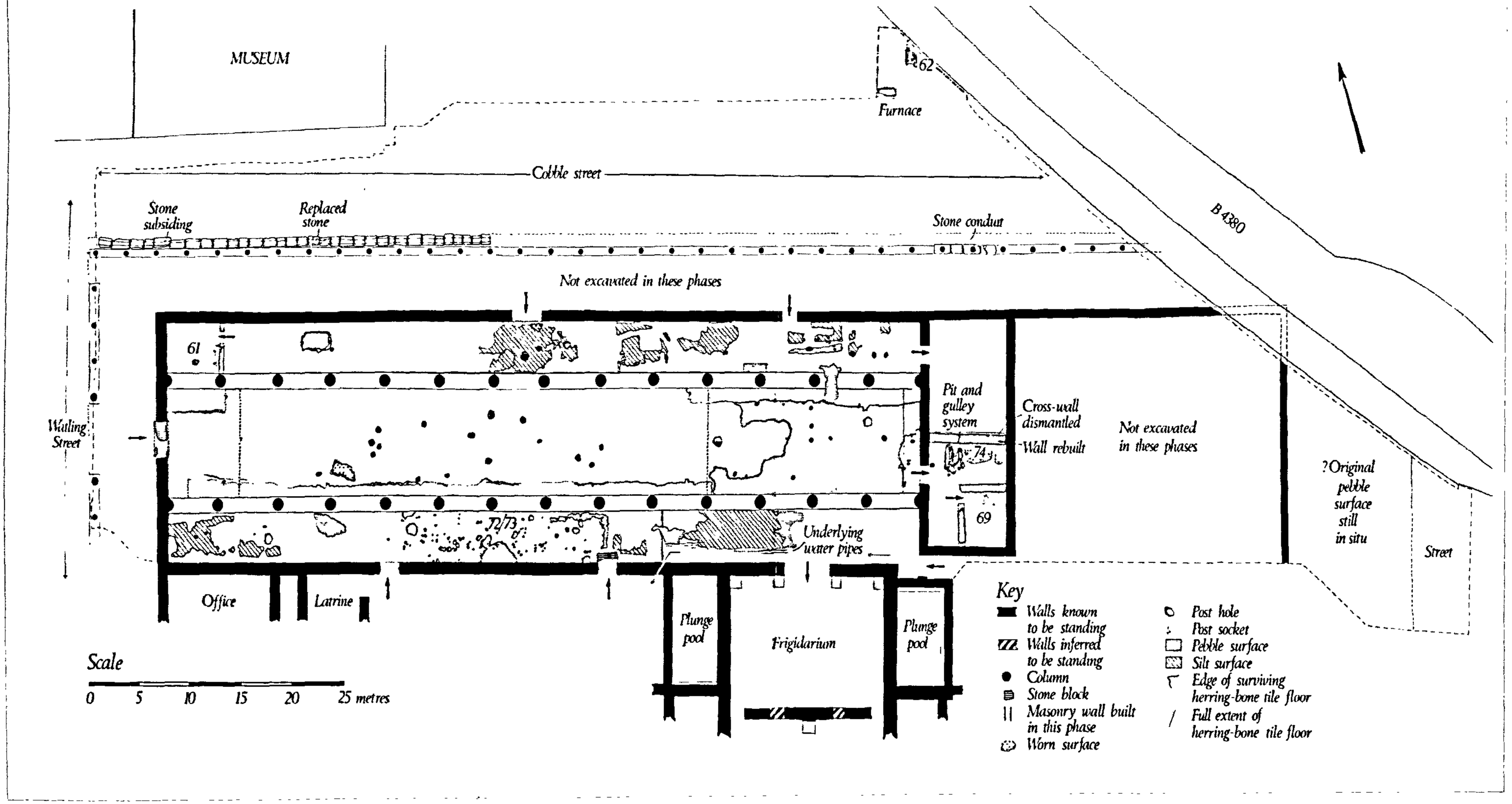

Figure 3. Introduction and background: Phase T-V (late 3rd - 4th century AD): Repair and modifications (Barker *et al*. 1997: Loose leaf plan A7)

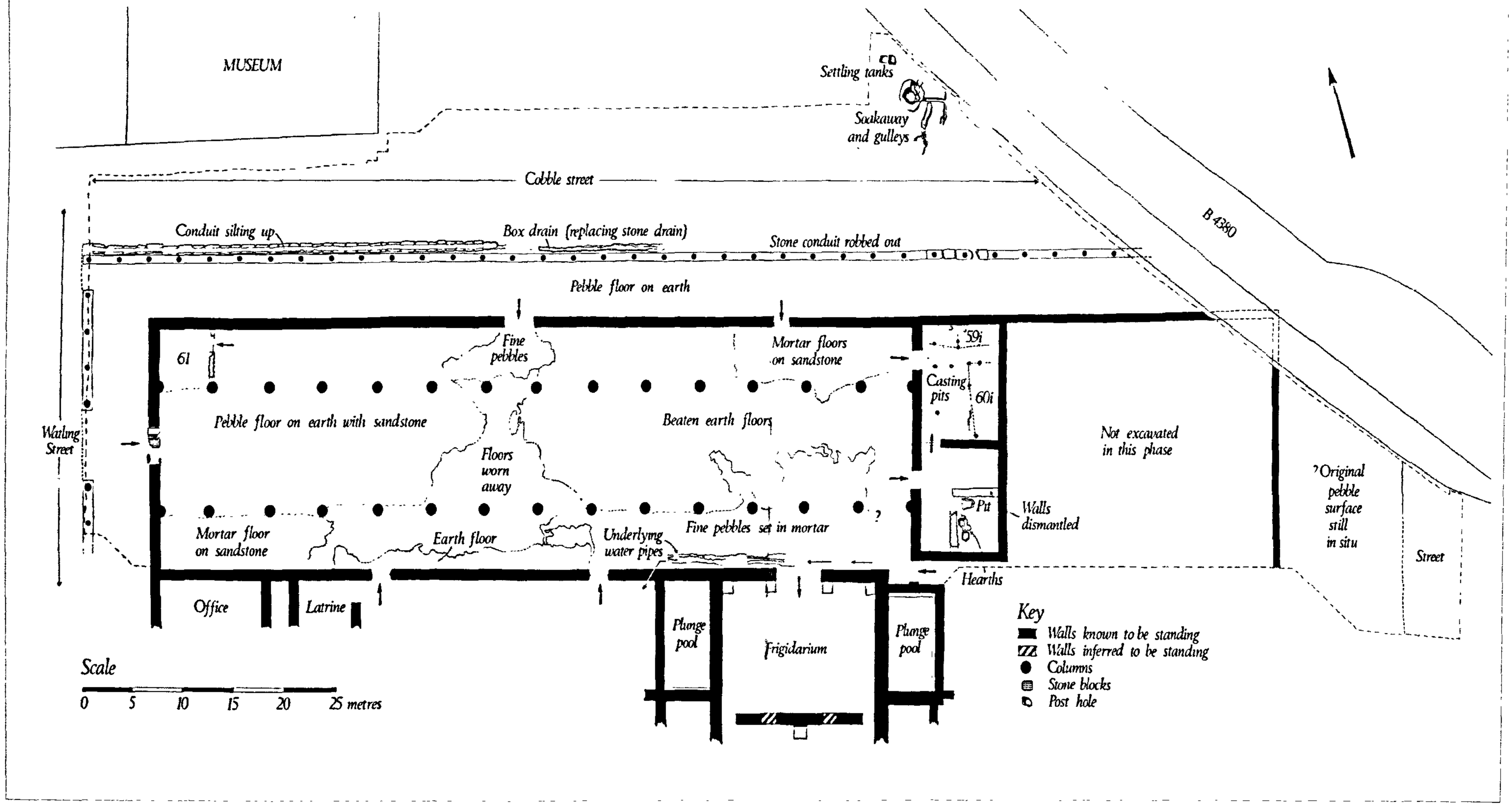

Figure 4. Introduction and background: Phase W (late 4th - mid 5th century AD): The last reflooring (Barker *et al*. 1997: Loose leaf plan A8)

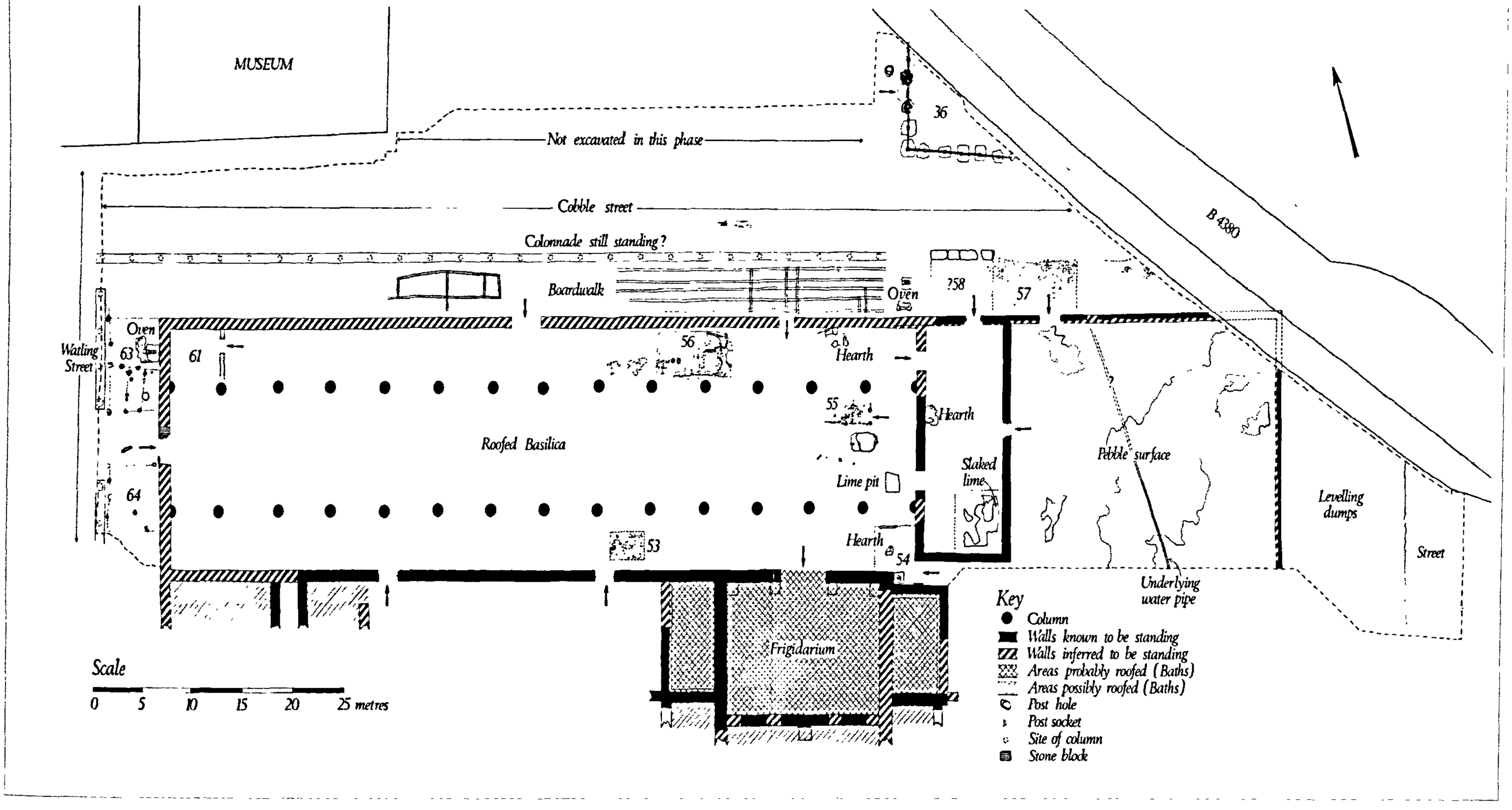

Figure 5. Introduction and background: Phase X (late 5th - mid 6th century AD): The building yard (Barker *et al*. 1997: Loose leaf plan A9)

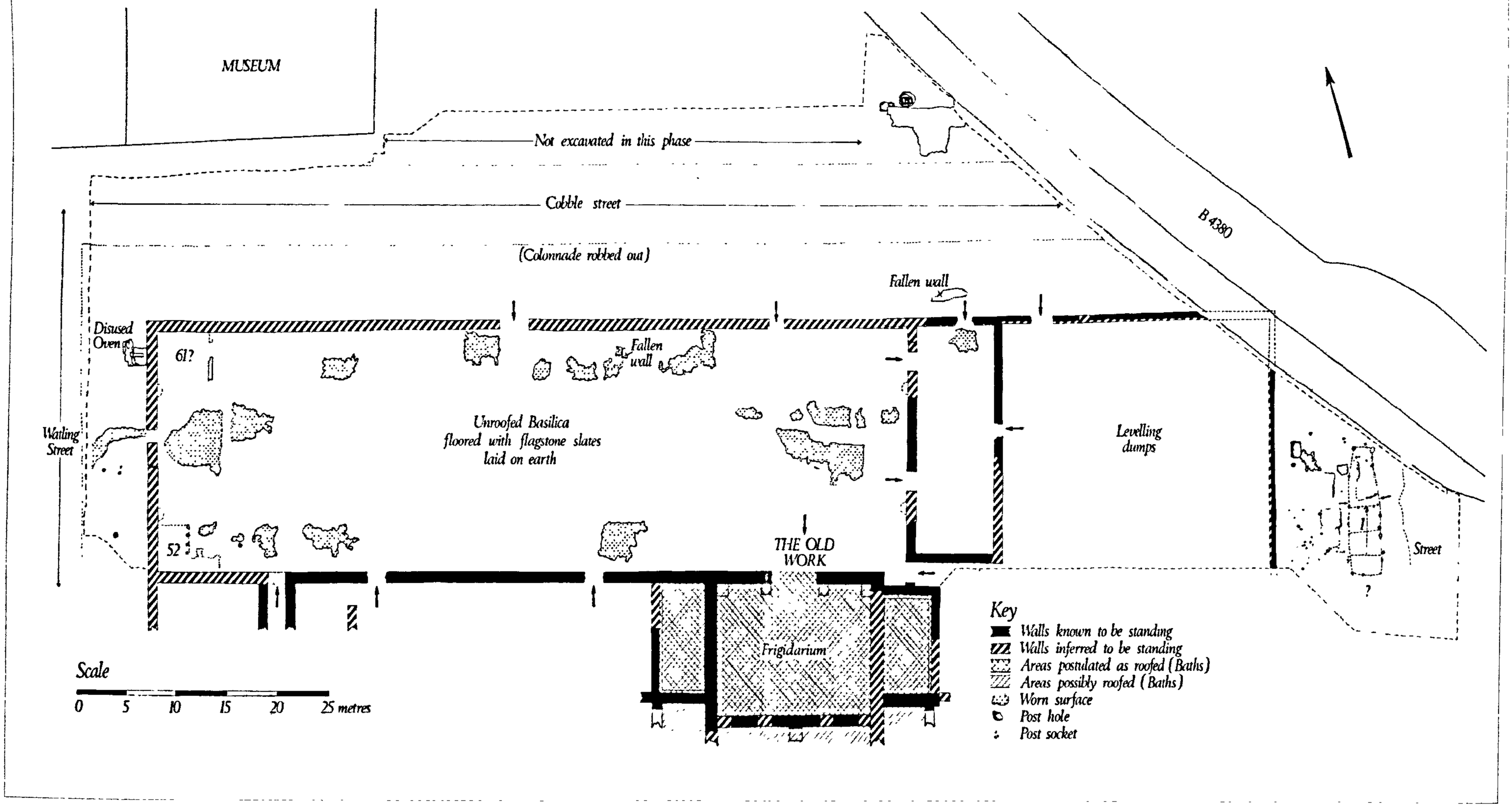

Figure 6. Introduction and background: Phase Y (early 6th - late 6th century AD): Dismantling and the market (Barker *et al*. 1997: Loose leaf plan A10)

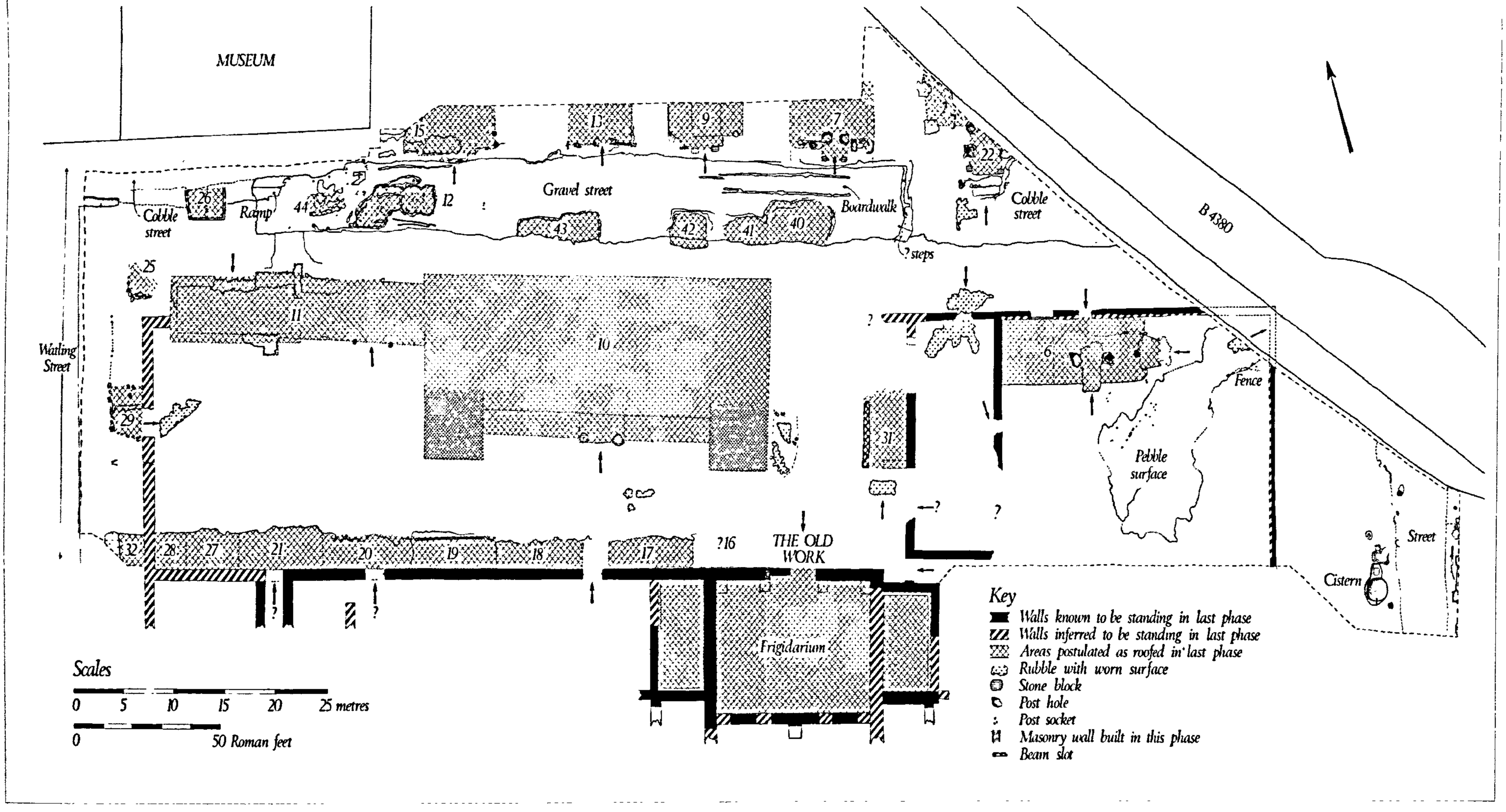

Figure 7. Introduction and background: Phase Z (early 6th - late 7th century AD): The palatial complex - the 'Great rebuilding' (Barker *et al*. 1997: Loose leaf plan A11)

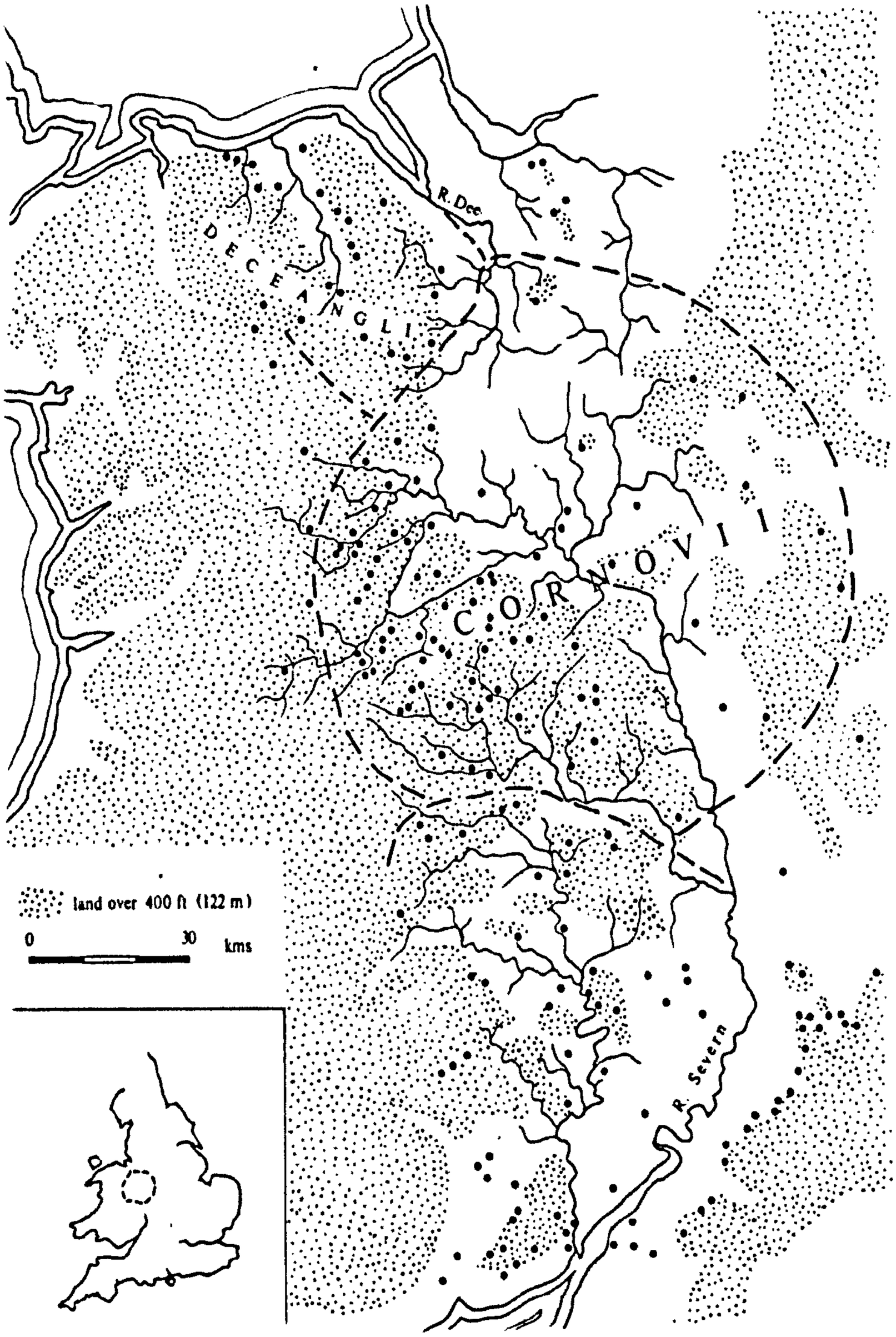

Figure 8. Introduction and background: Webster's (1991: 8, Figure 8) pre-Roman Iron Age Cornovian territory

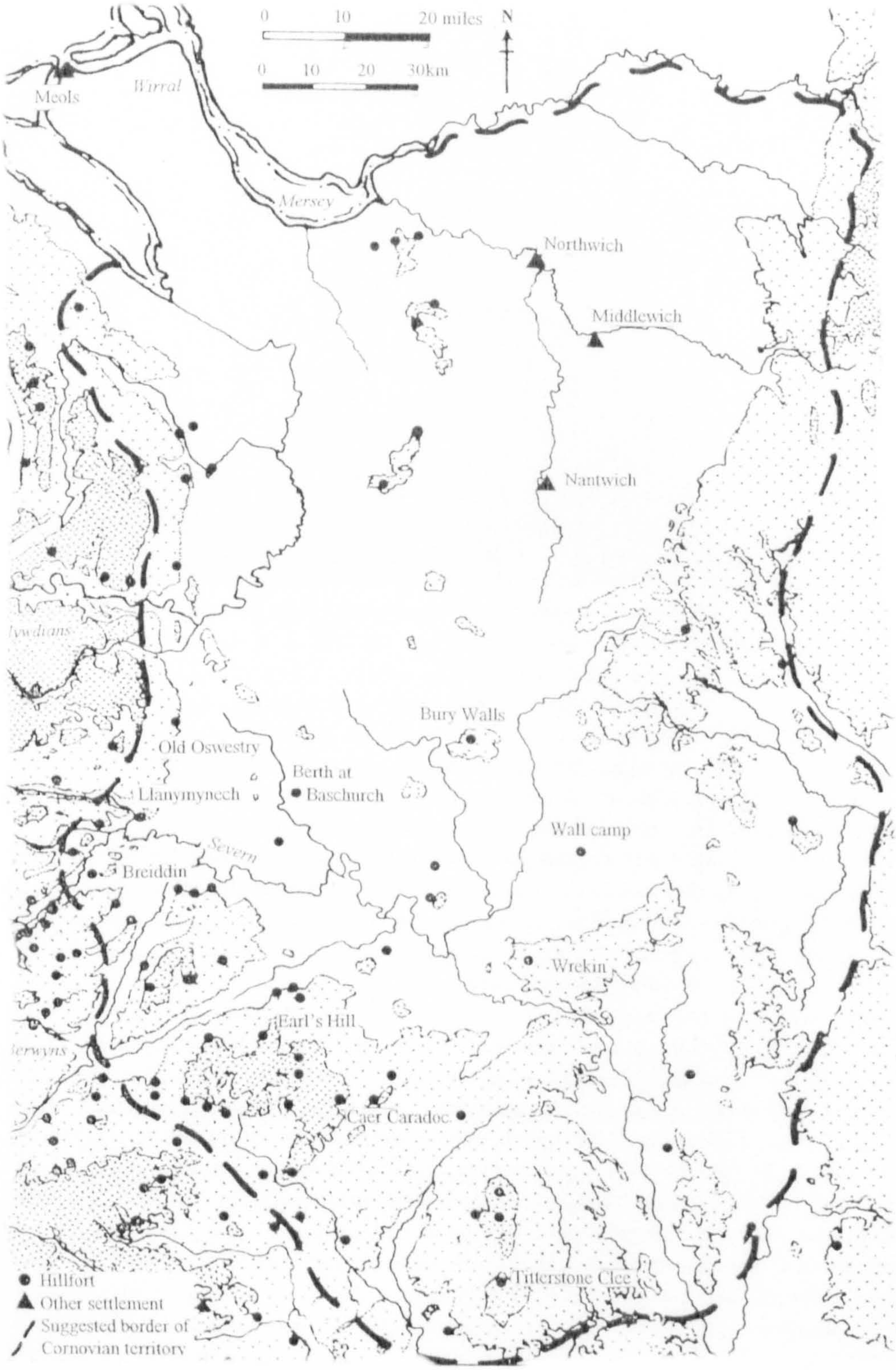

Figure 9. Introduction and background: White & Barker's (1998: 33, Figure 13) pre-Roman Iron Age Cornovian territory

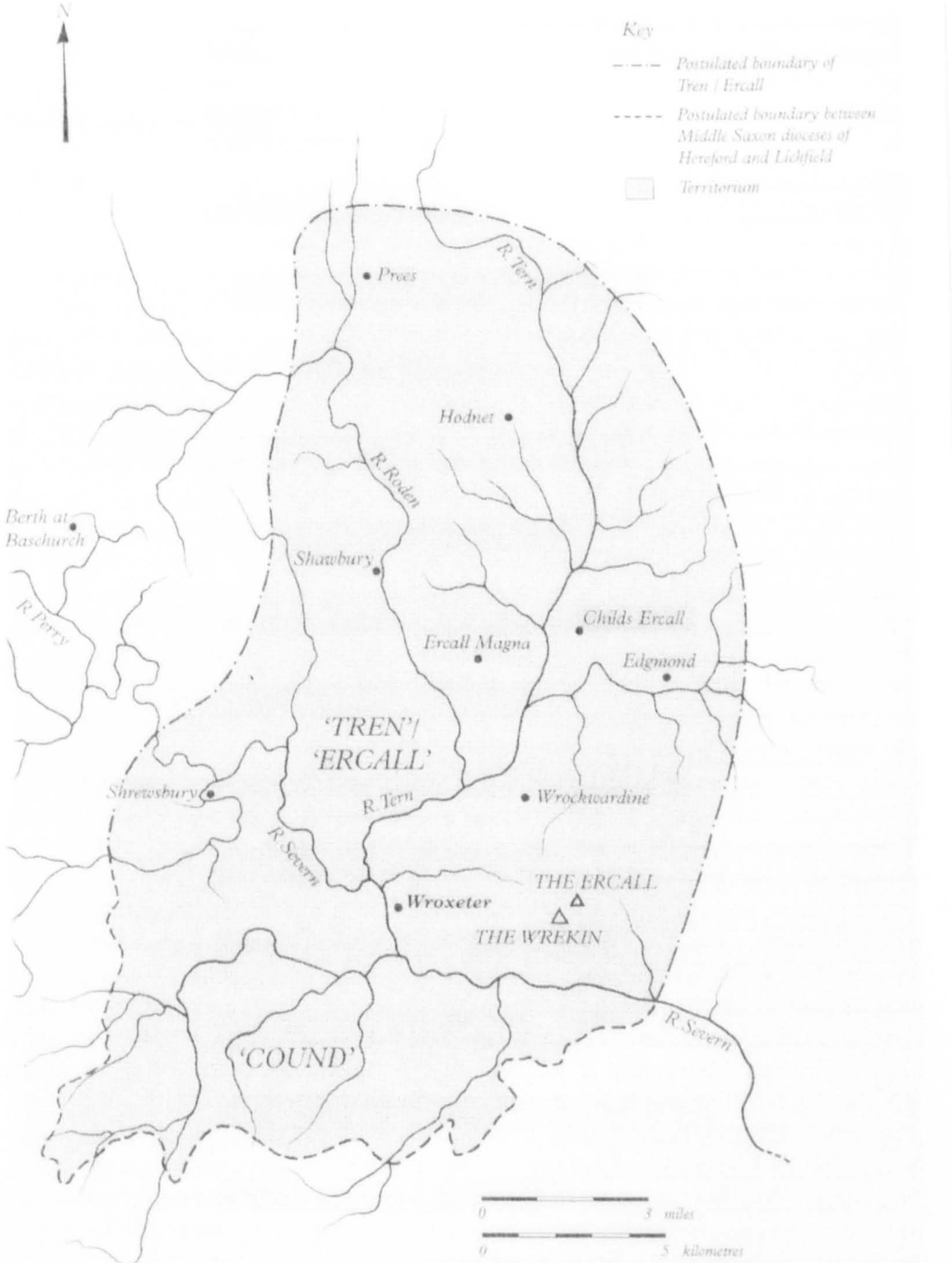

Figure 10. Introduction and background: *Wreocensætna's* early medieval territory (White & Barker 1998: 133, Figure 67)

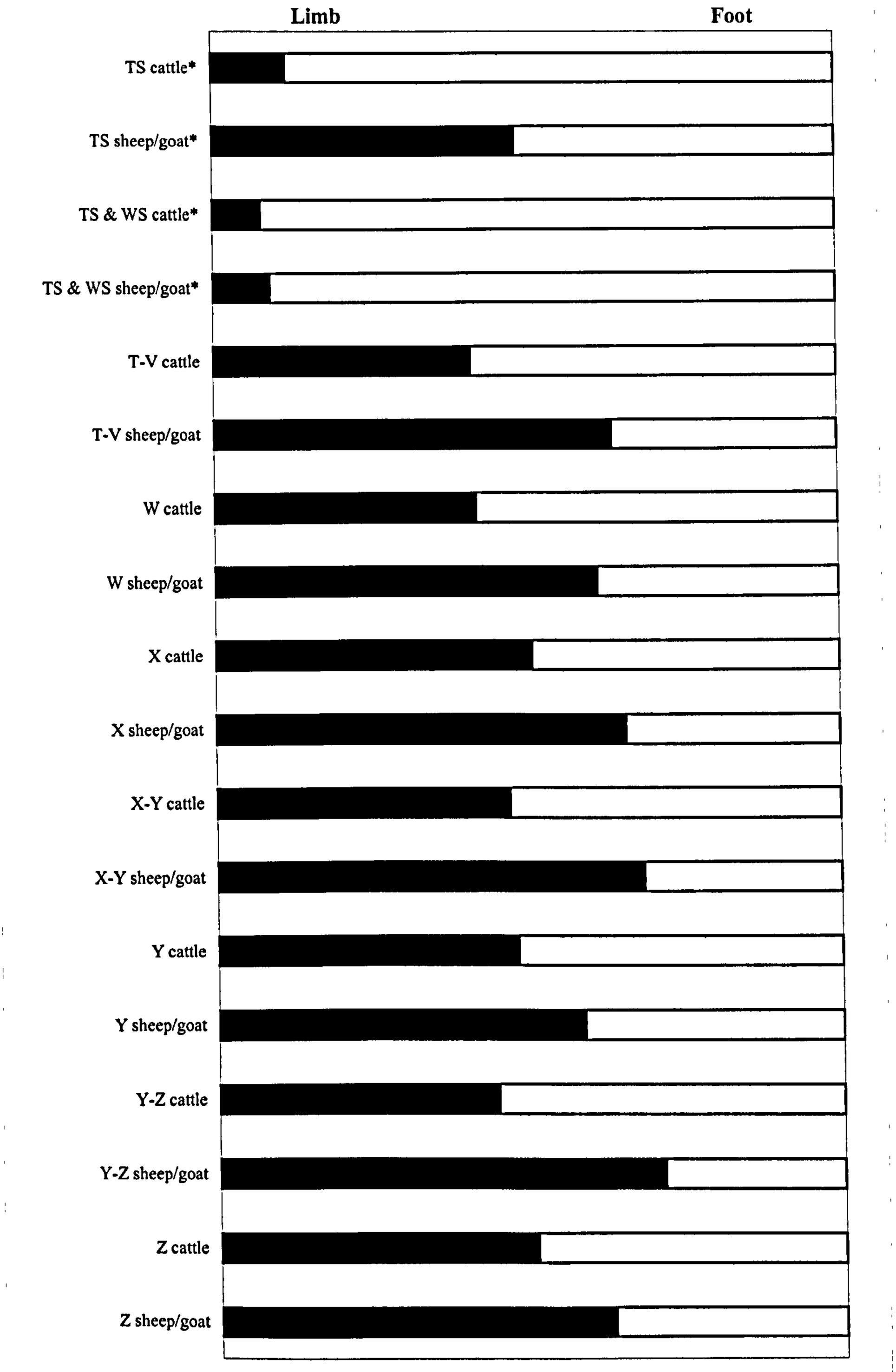

Figure 11. Taphonomy: Recovery bias: Proportions of limb and foot bones from the baths basilica (a
to Payne (1975: 11)

* TS = hand retrived; WS = wet sieved; 'limb' and 'foot' definitions based on Perkins & Daly (1968: 99)
NB. Baths basilica based on MNE; 'foot' MNE multipled by three for comparison with Payne (1975)

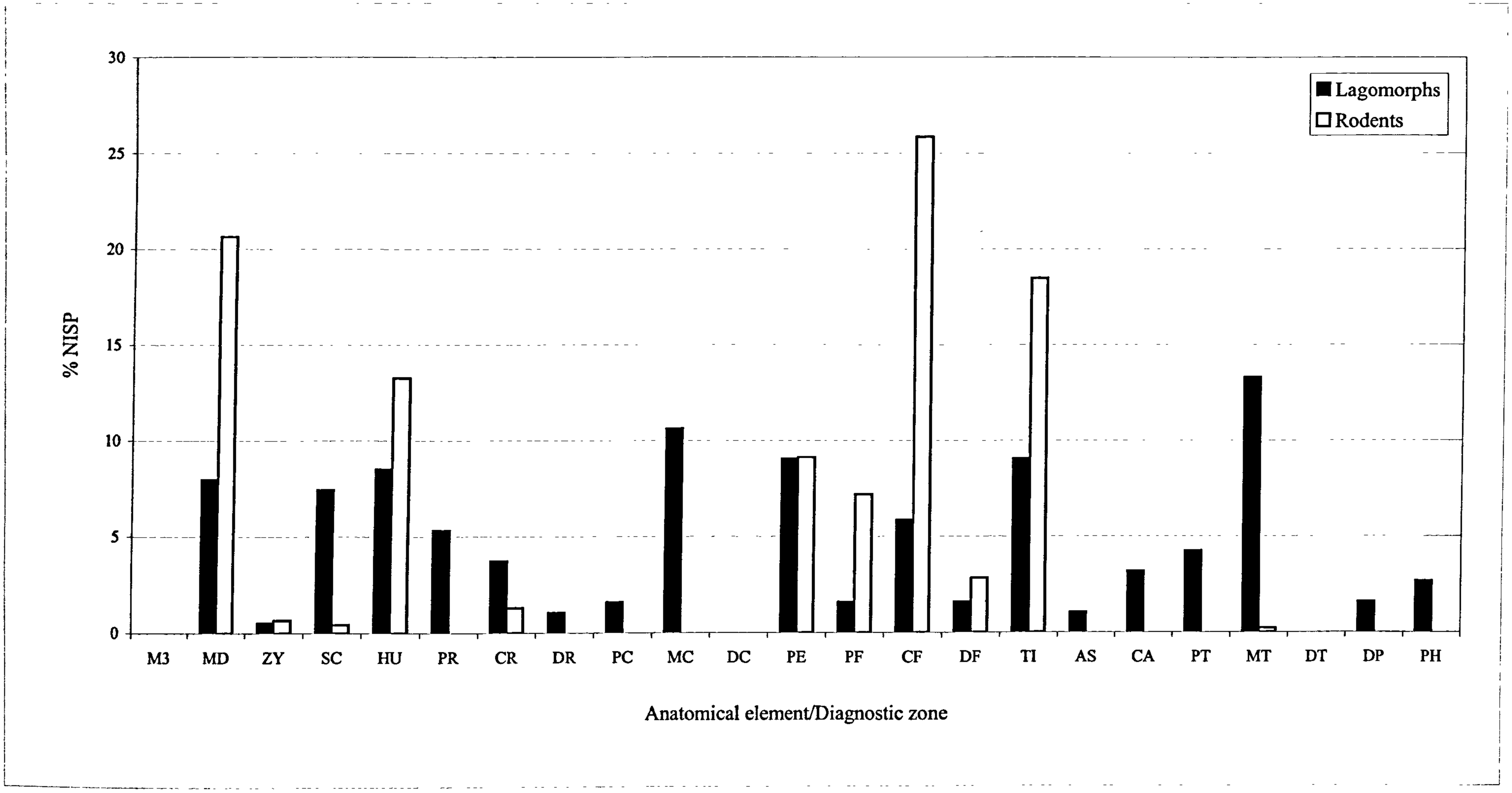

Figure 12. Taphonomy: Recovery bias: Comparison of lagomorph and rodent anatomical element NISP (all phases)

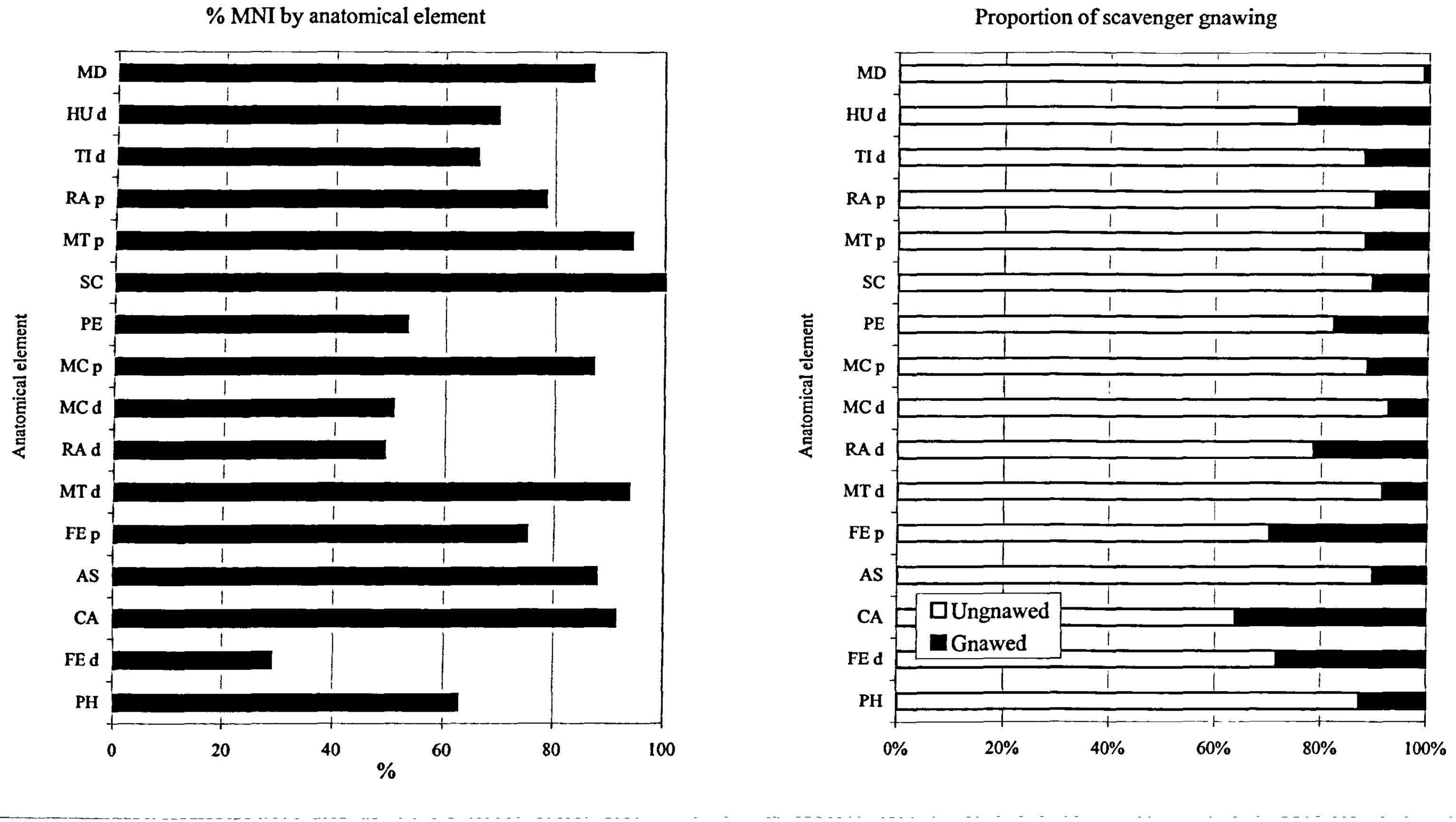

Figure 13. Taphonomy: Scavenger gnawing: Cattle NISP anatomical representation compared to proportions of gnawed and ungnawed specimens (all phases)

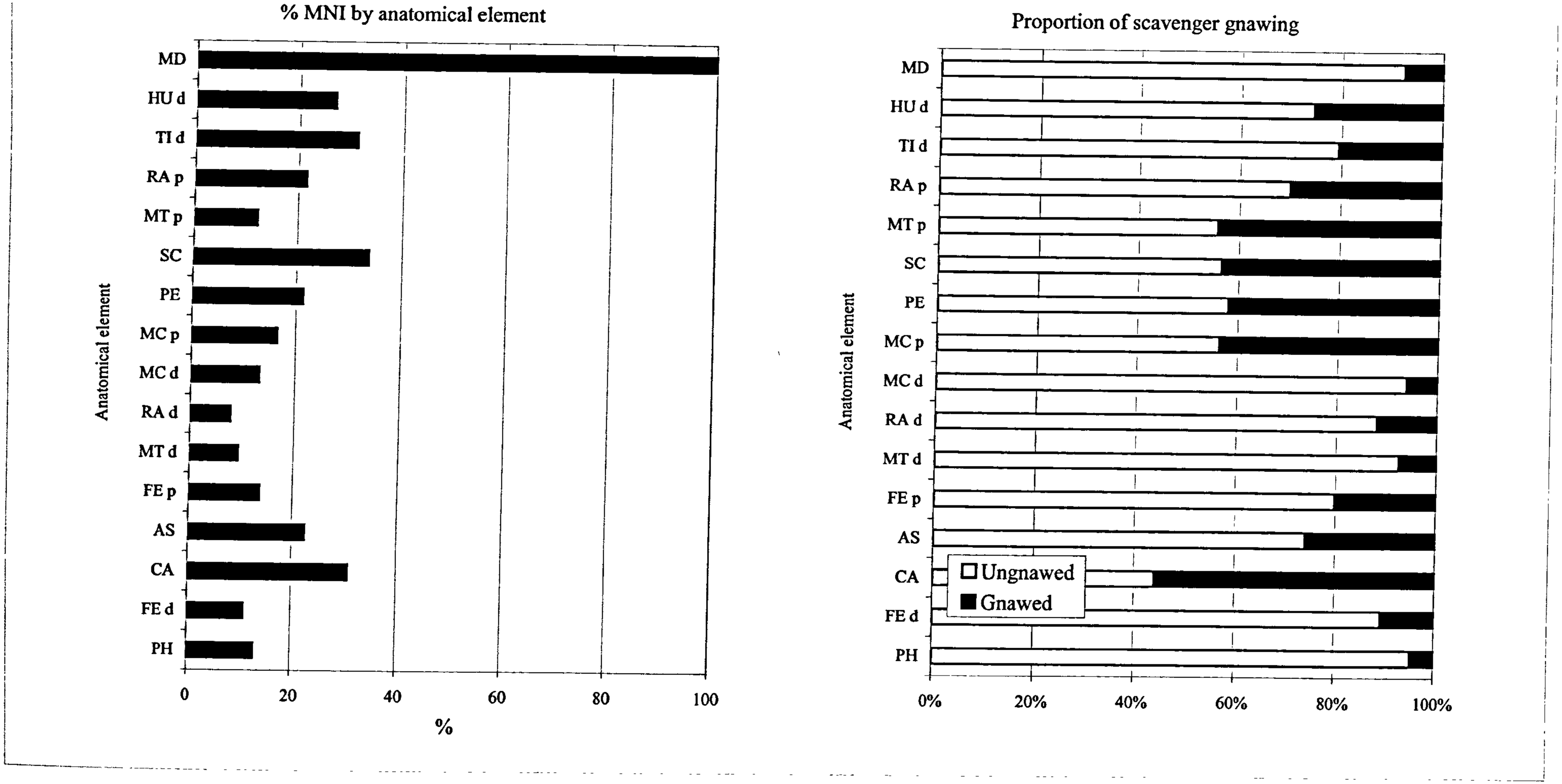

Figure 14. Taphonomy: Scavenger gnawing: Pig NISP anatomical representation compared to proportions of gnawed and ungnawed specimens (all phases)

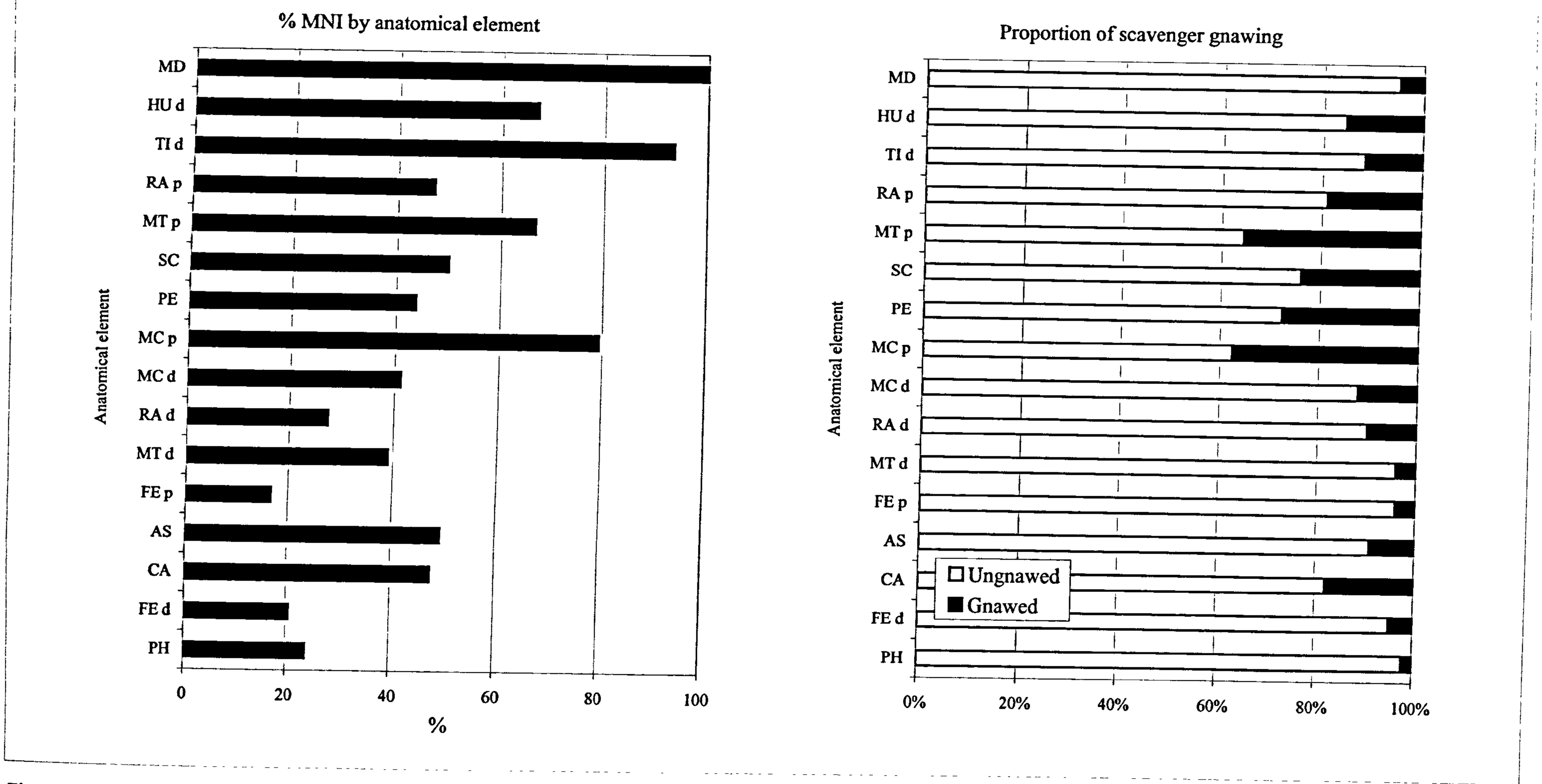

Figure 15. Taphonomy: Scavenger gnawing: Sheep/goat NISP anatomical representation compared to proportions of gnawed and ungnawed specimens (all phases)

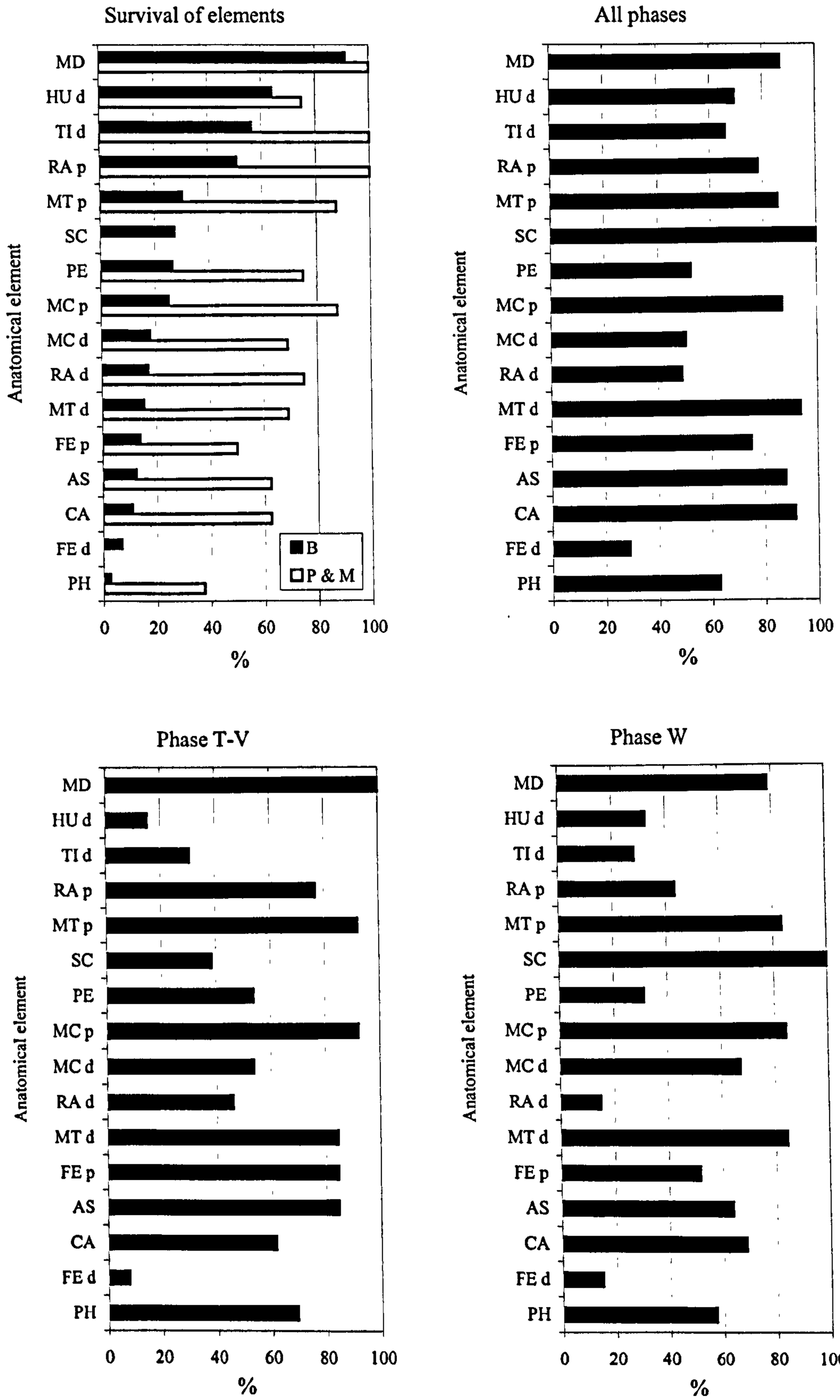

Figure 16. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to cattle

B = Brain (1981: 277, Table 5); P & M = Payne & Munson (1985: 41, Table 2)
NB. Mid-point values and proximal 1st phalange used from Payne & Munson

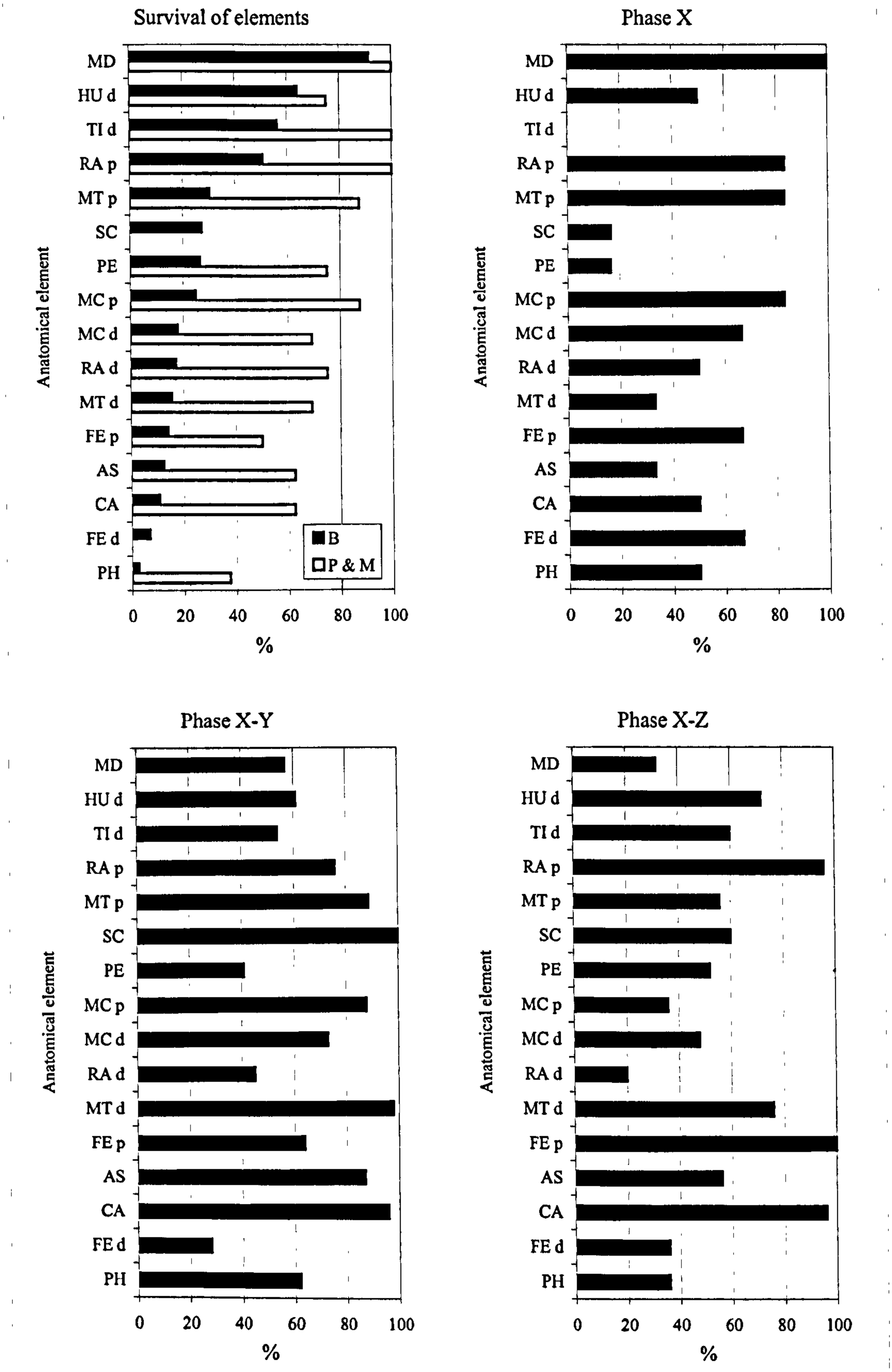

Figure 16 cont. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to cattle

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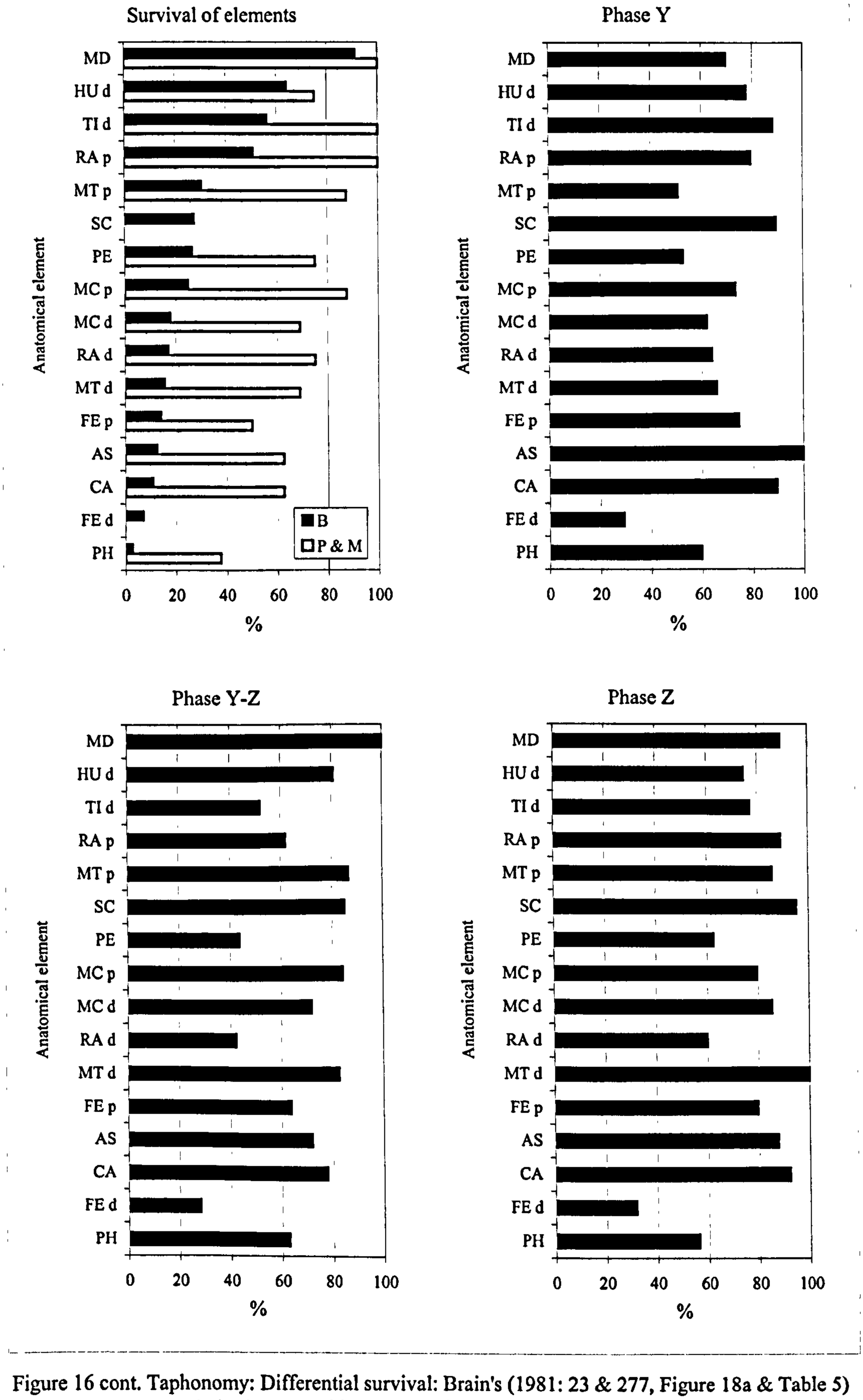

Figure 16 cont. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to cattle

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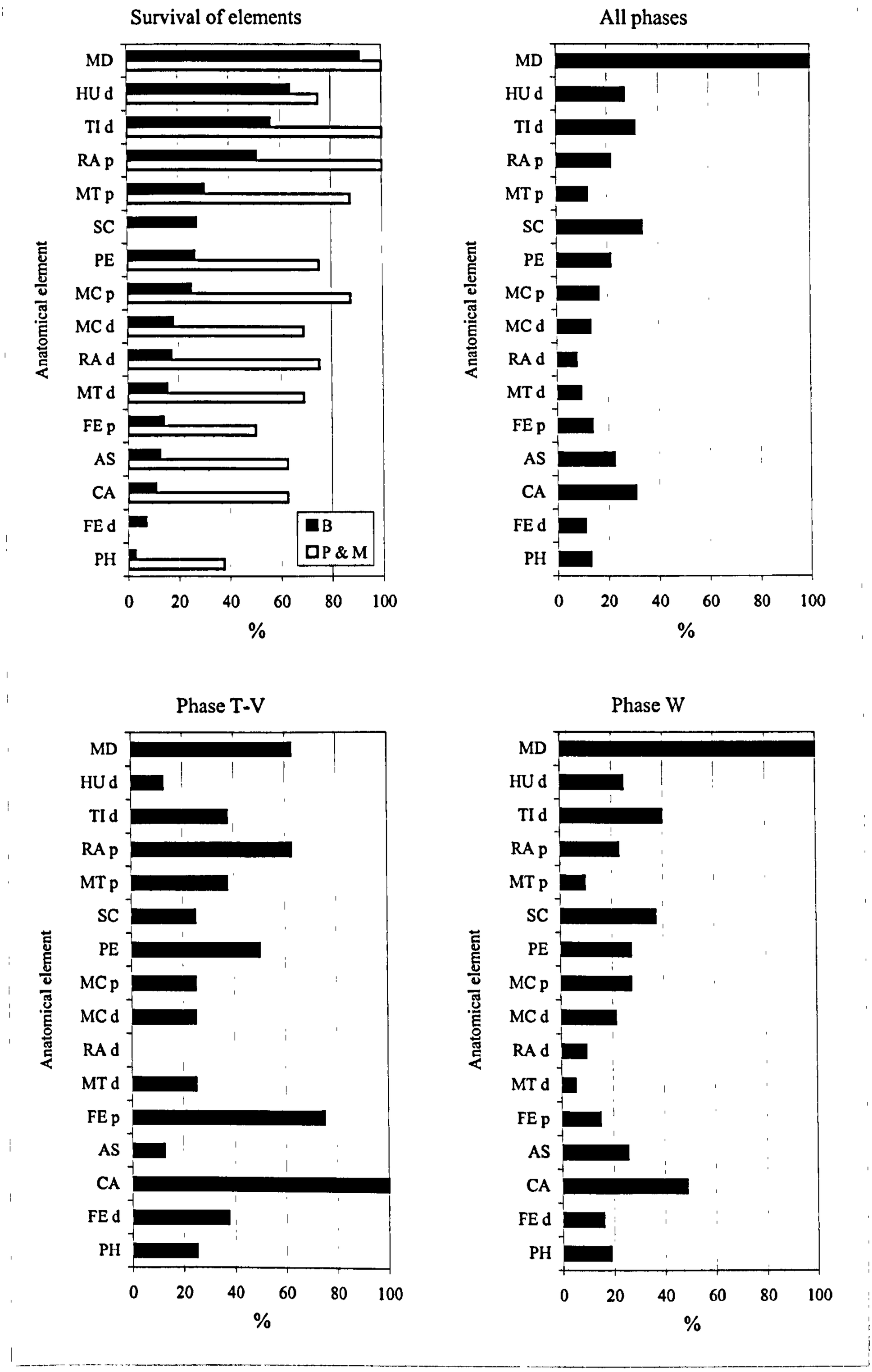


Figure 17. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to pig

B = Brain (1981: 277, Table 5); P & M = Payne & Munson (1985: 41, Table 2)
NB. Mid-point values and proximal 1st phalange used from Payne & Munson

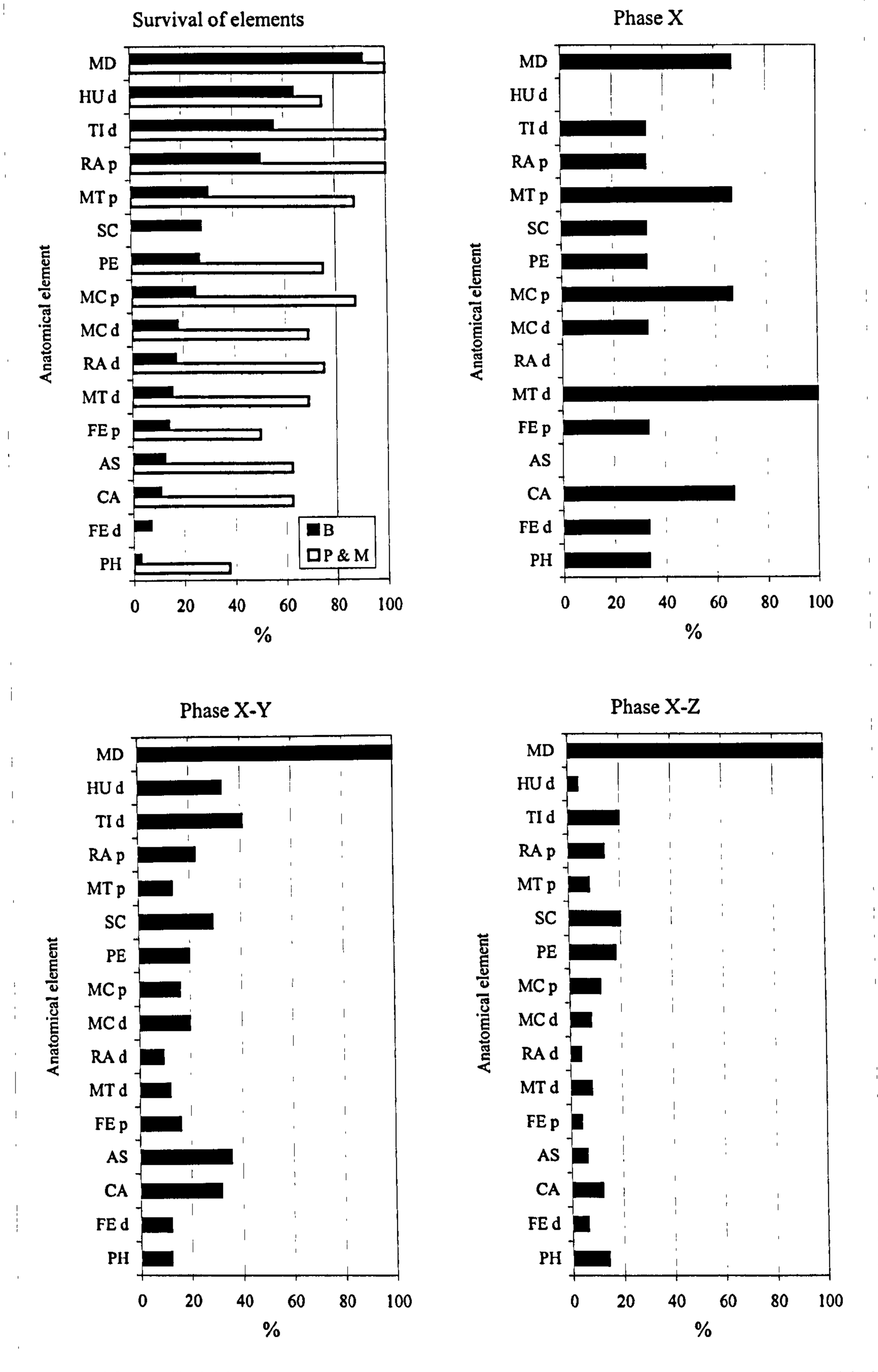


Figure 17 cont. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to pig

B = Brain (1981: 277, Table 5); P & M = Payne & Munson (1985: 41, Table 2)
NB. Mid-point values and proximal 1st phalange used from Payne & Munson

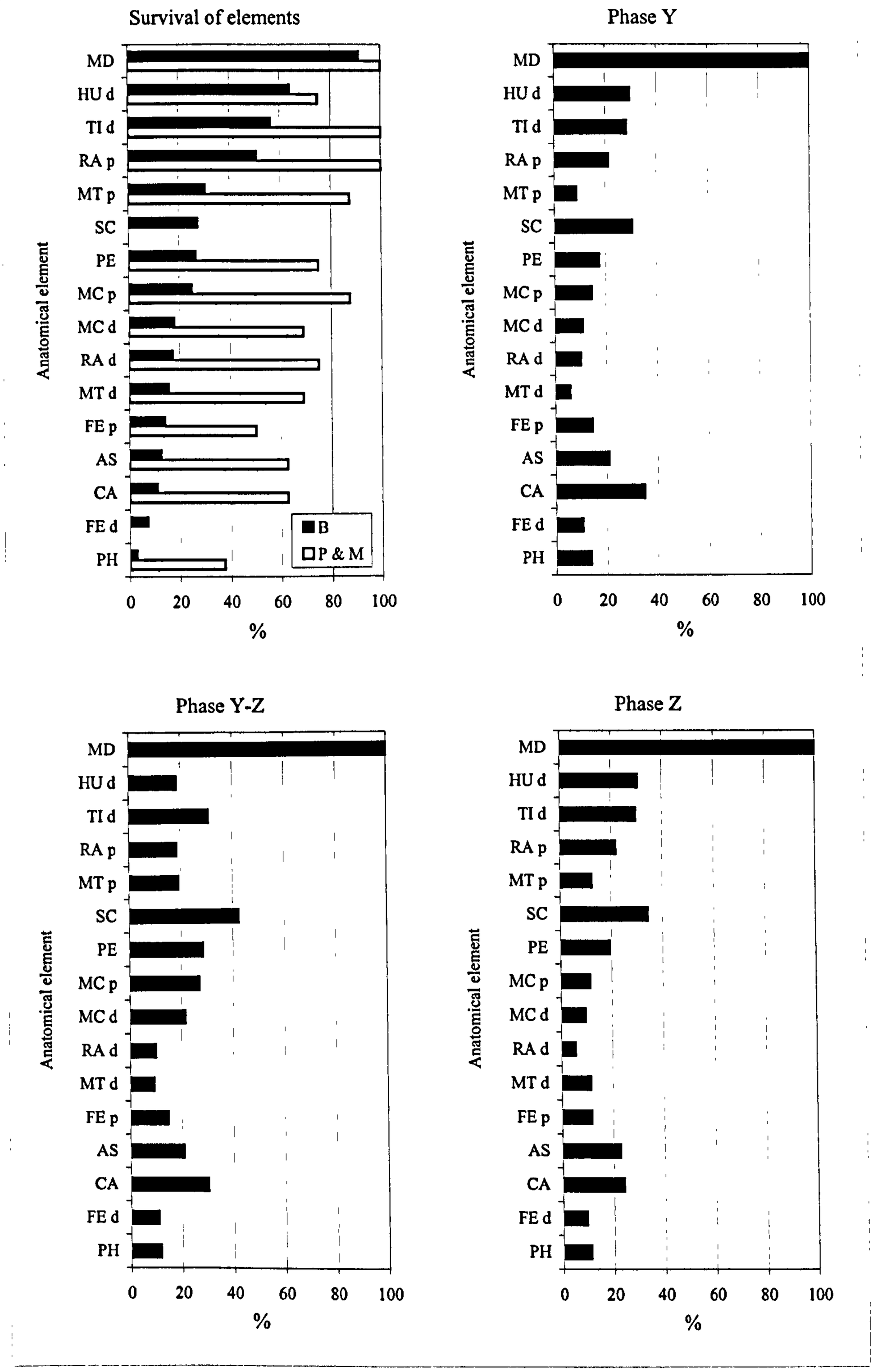


Figure 17 cont. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to pig

B = Brain (1981: 277, Table 5); P & M = Payne & Munson (1985: 41, Table 2)
NB. Mid-point values and proximal 1st phalange used from Payne & Munson

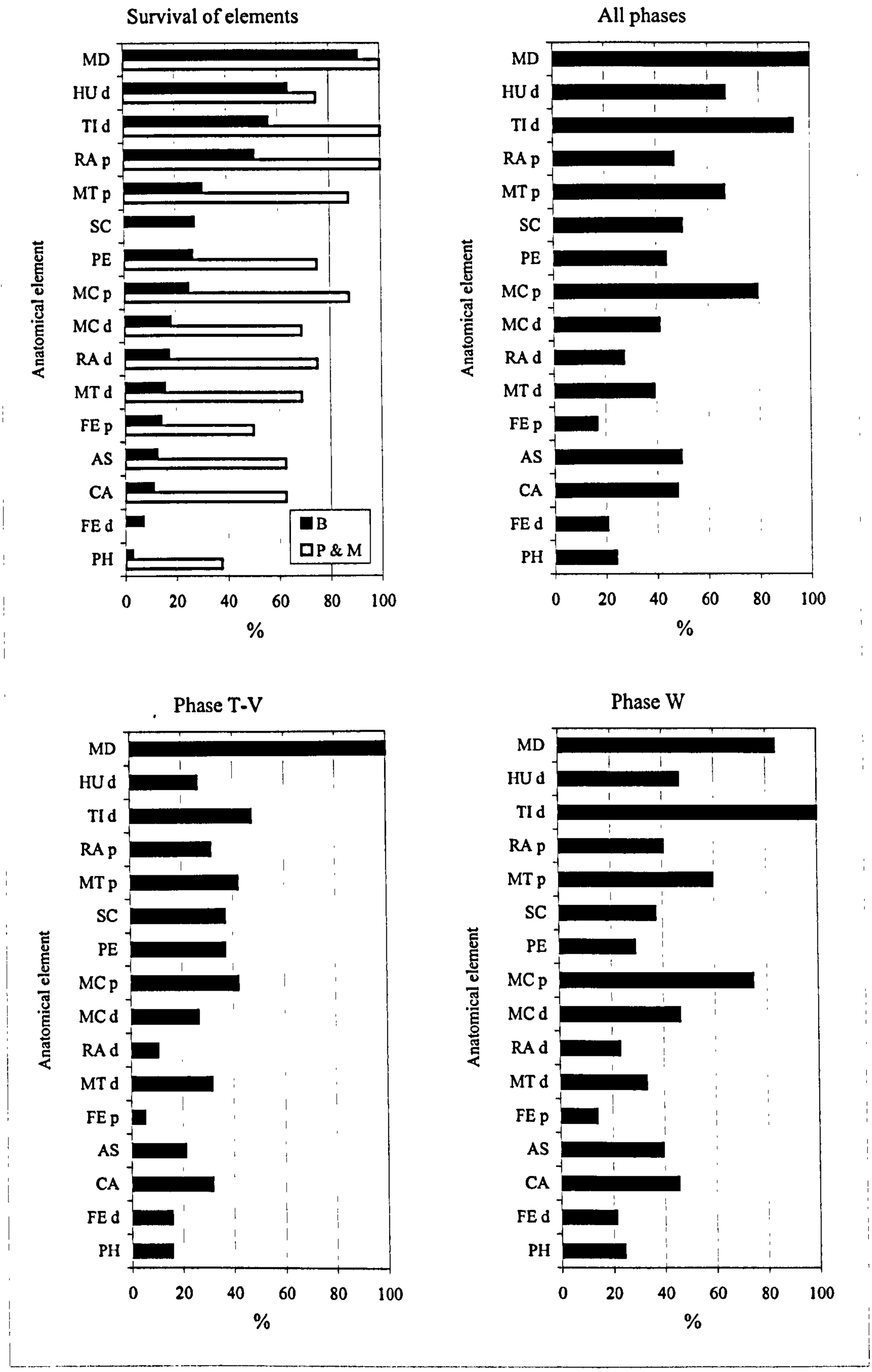


Figure 18. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to sheep/goat

B = Brain (1981: 277, Table 5); P & M = Payne & Munson (1985: 41, Table 2)
NB. Mid-point values and proximal 1st phalange used from Payne & Munson

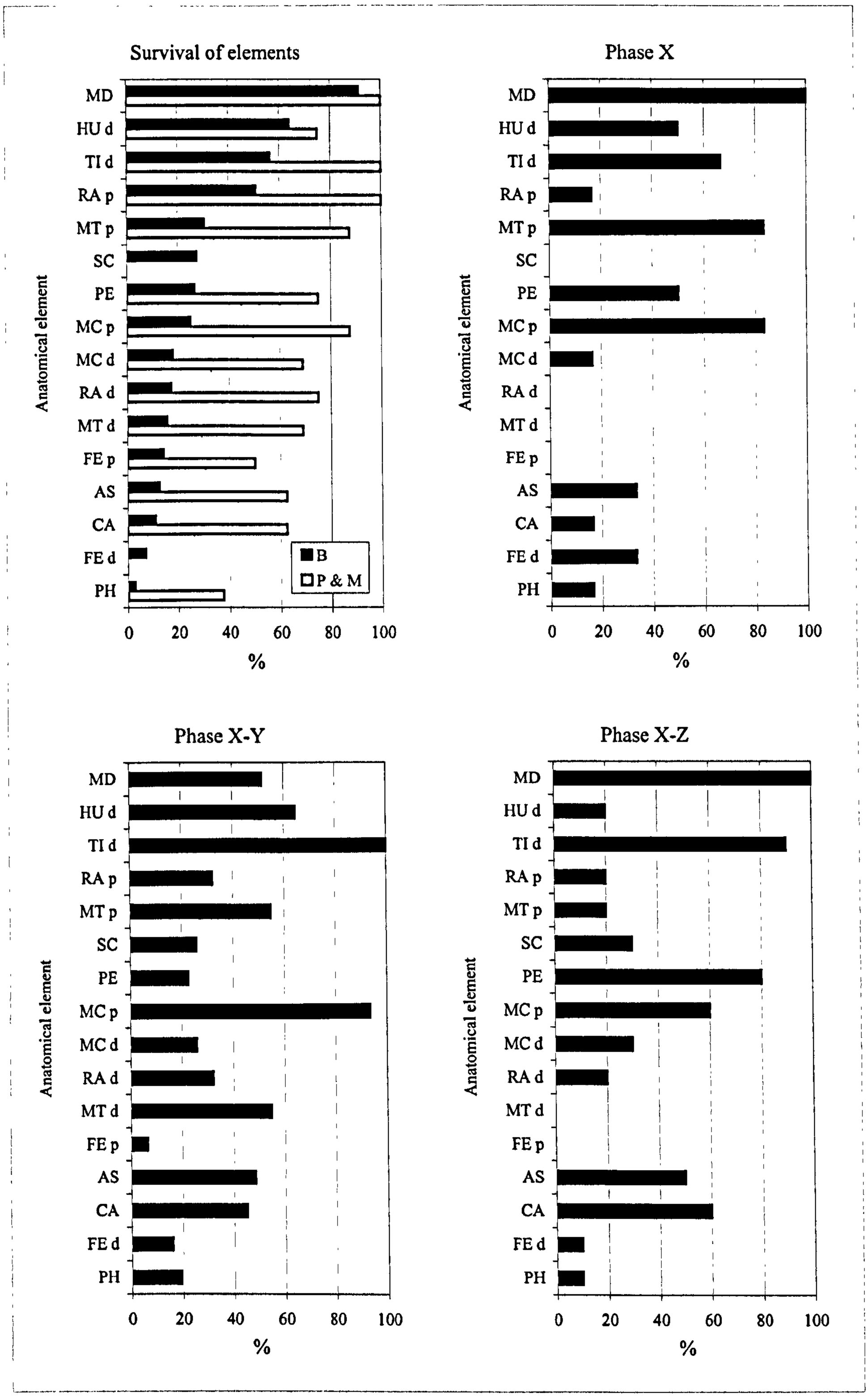


Figure 18 cont. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to sheep/goat

B = Brain (1981: 277, Table 5); P & M = Payne & Munson (1985: 41, Table 2)
NB. Mid-point values and proximal 1st phalange used from Payne & Munson

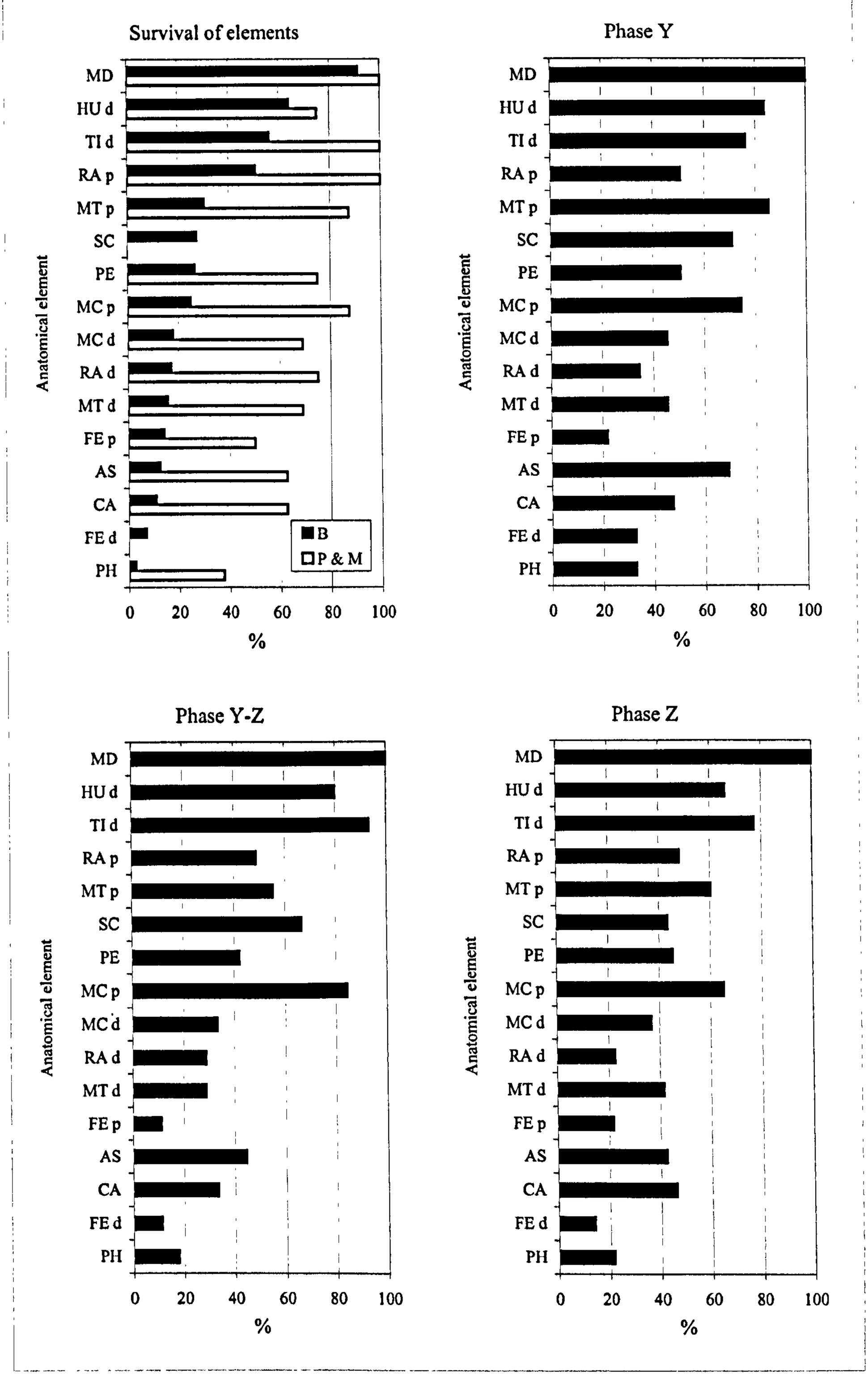


Figure 18 cont. Taphonomy: Differential survival: Brain's (1981: 23 & 277, Figure 18a & Table 5) and Payne & Munson's (1985: 41, Table 2) anatomical element attrition compared to sheep/goat

B = Brain (1981: 277, Table 5); P & M = Payne & Munson (1985: 41, Table 2)
NB. Mid-point values and proximal 1st phalange used from Payne & Munson

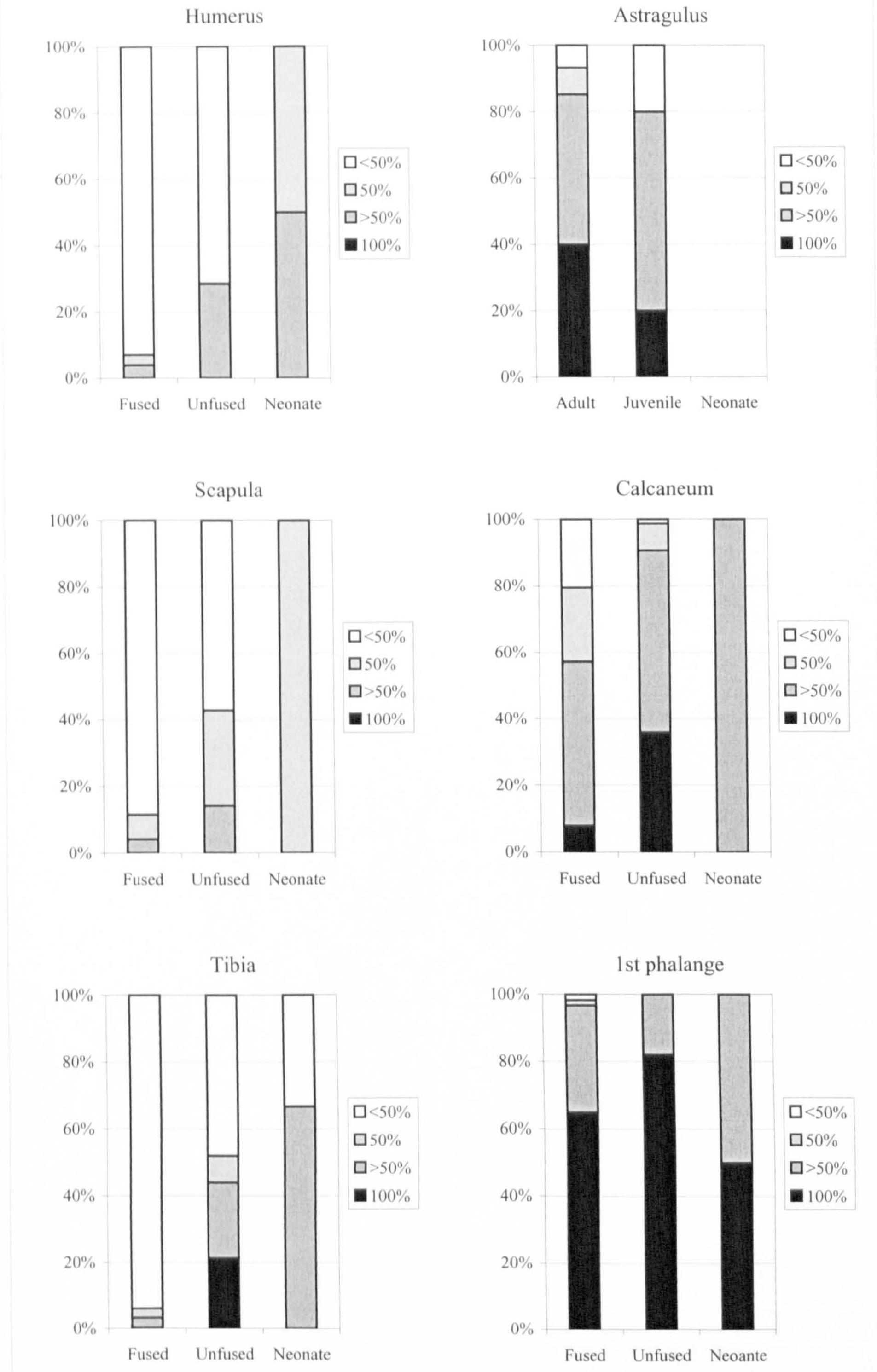


Figure 19. Taphonomy: Age related attrition: An index of fragility for cattle fragments (all phases)

NB. Fused = fused, fusing & adult; Unfused = unfused & juvenile

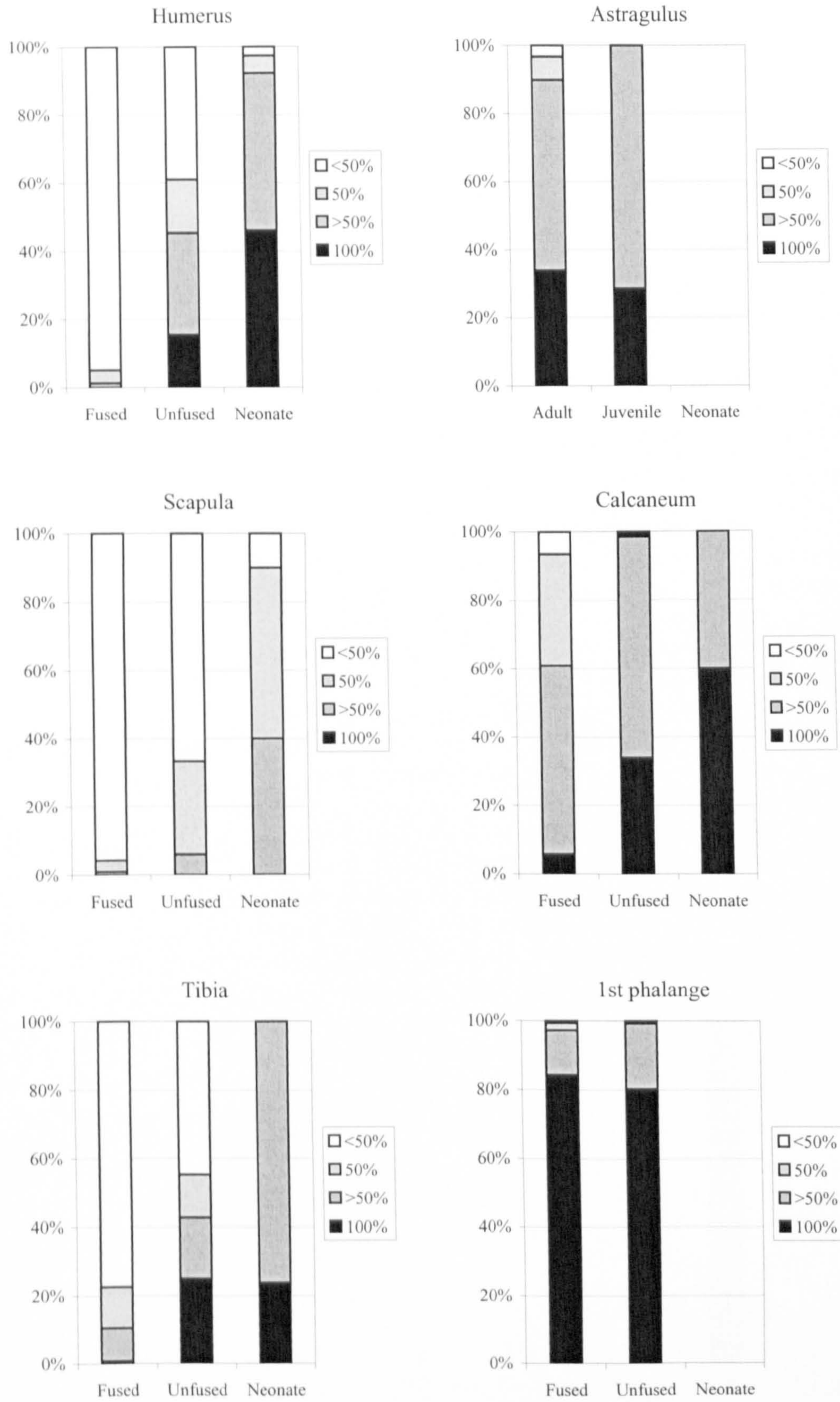


Figure 20. Taphonomy: Age related attrition: An index of fragility for pig fragments (all phases)

NB. Fused = fused, fusing & adult; Unfused = unfused & juvenile

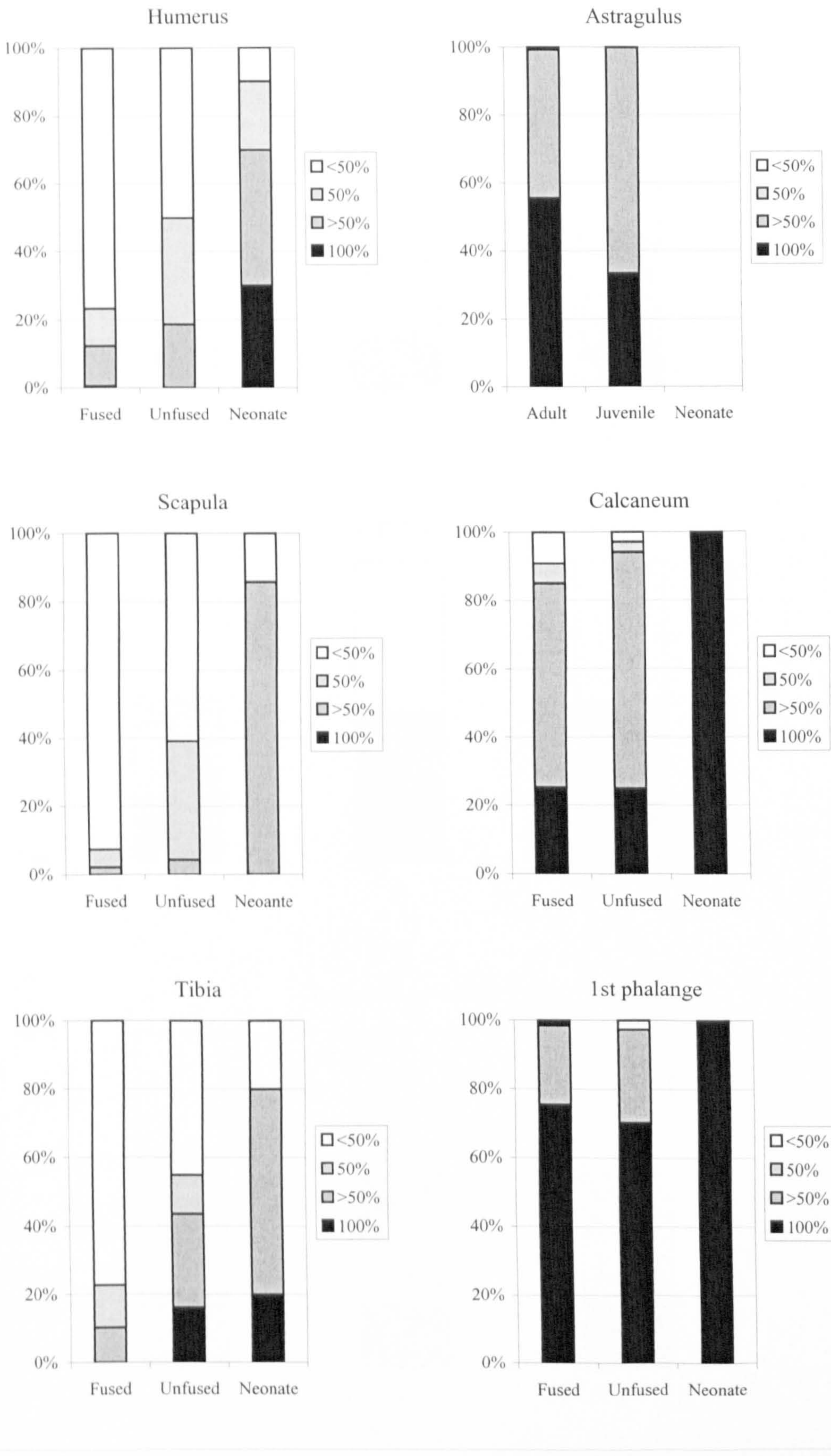


Figure 21. Taphonomy: Age related attrition: An index of fragility for sheep/goat fragments (all phases)

NB. Fused = fused, fusing & adult; Unfused = unfused & juvenile

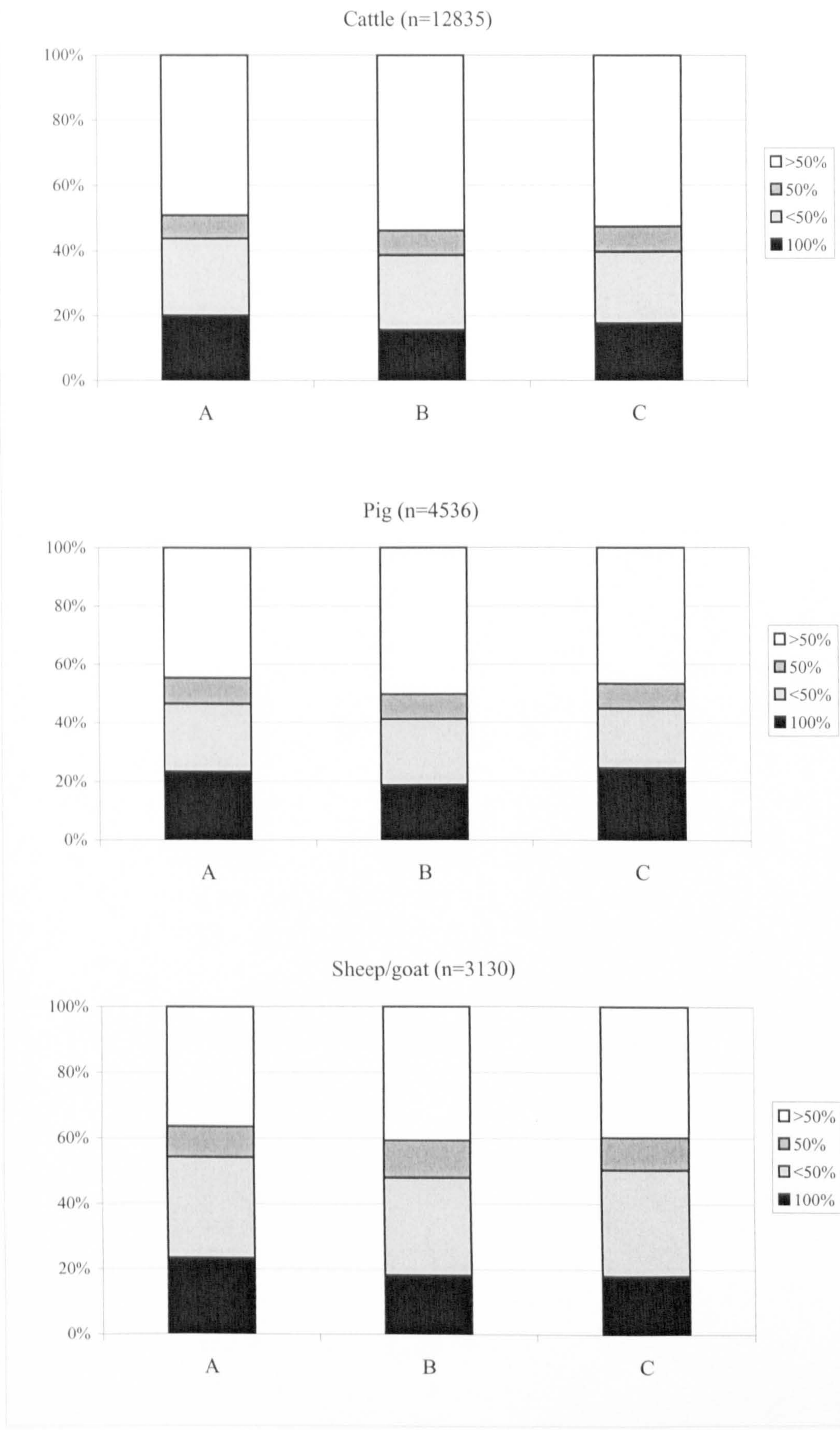


Figure 22. Deposition: A-B-C category deposits: Taphonomic indicators: Fragmentation of cattle, pig and sheep/goat specimens (all phases)

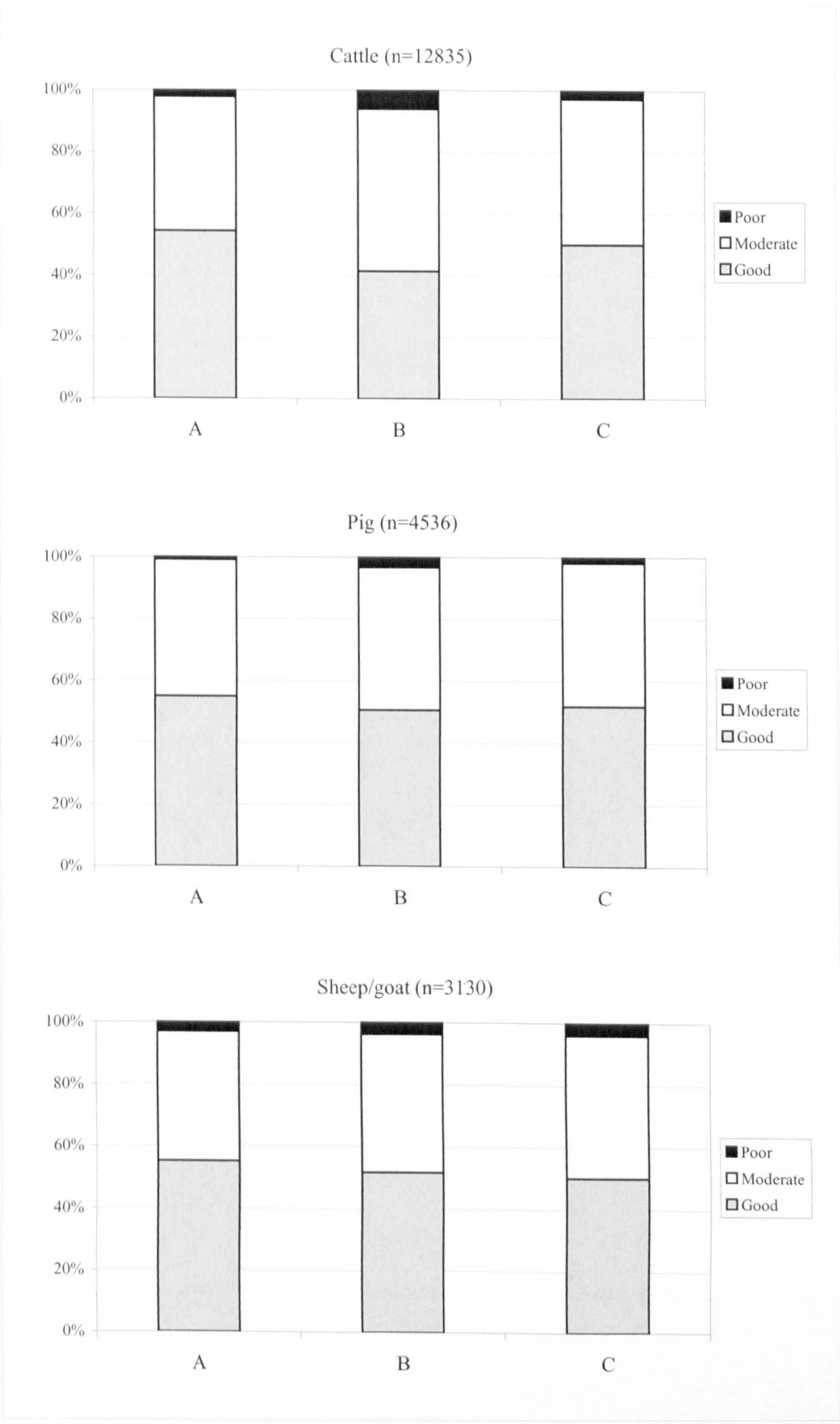


Figure 23. Deposition: A-B-C category deposits: Taphonomic indicators: Surface preservation of cattle, pig and sheep/goat specimens (all phases)

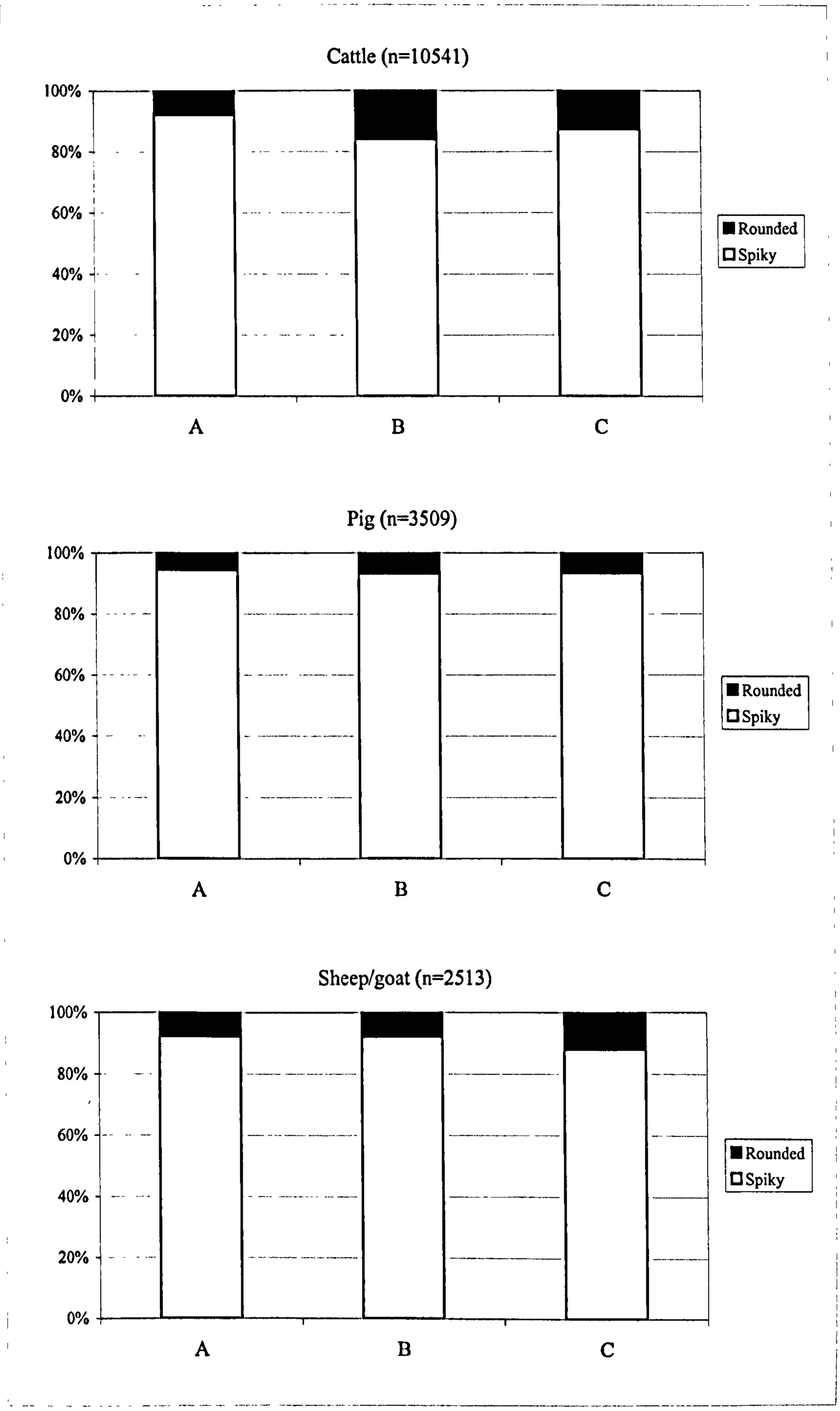


Figure 24. Deposition: A-B-C category deposits: Taphonomic indicators: Angularity of breakage of cattle, pig and sheep/goat specimens (all phases)

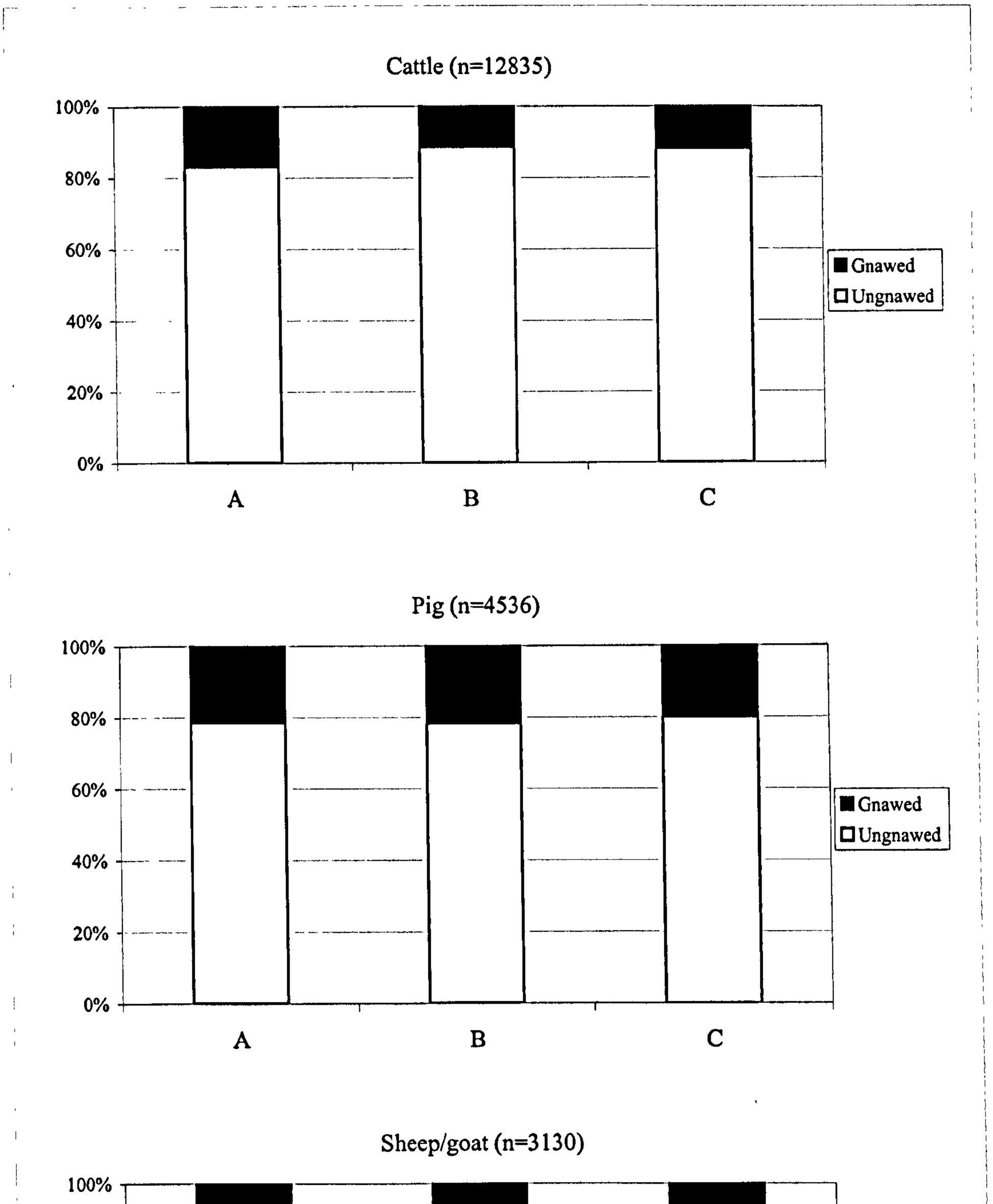


Figure 25. Deposition: A-B-C category deposits: Taphonomic indicators: Scavenger gnawing of cattle, pig and sheep/goat specimens (all phases)

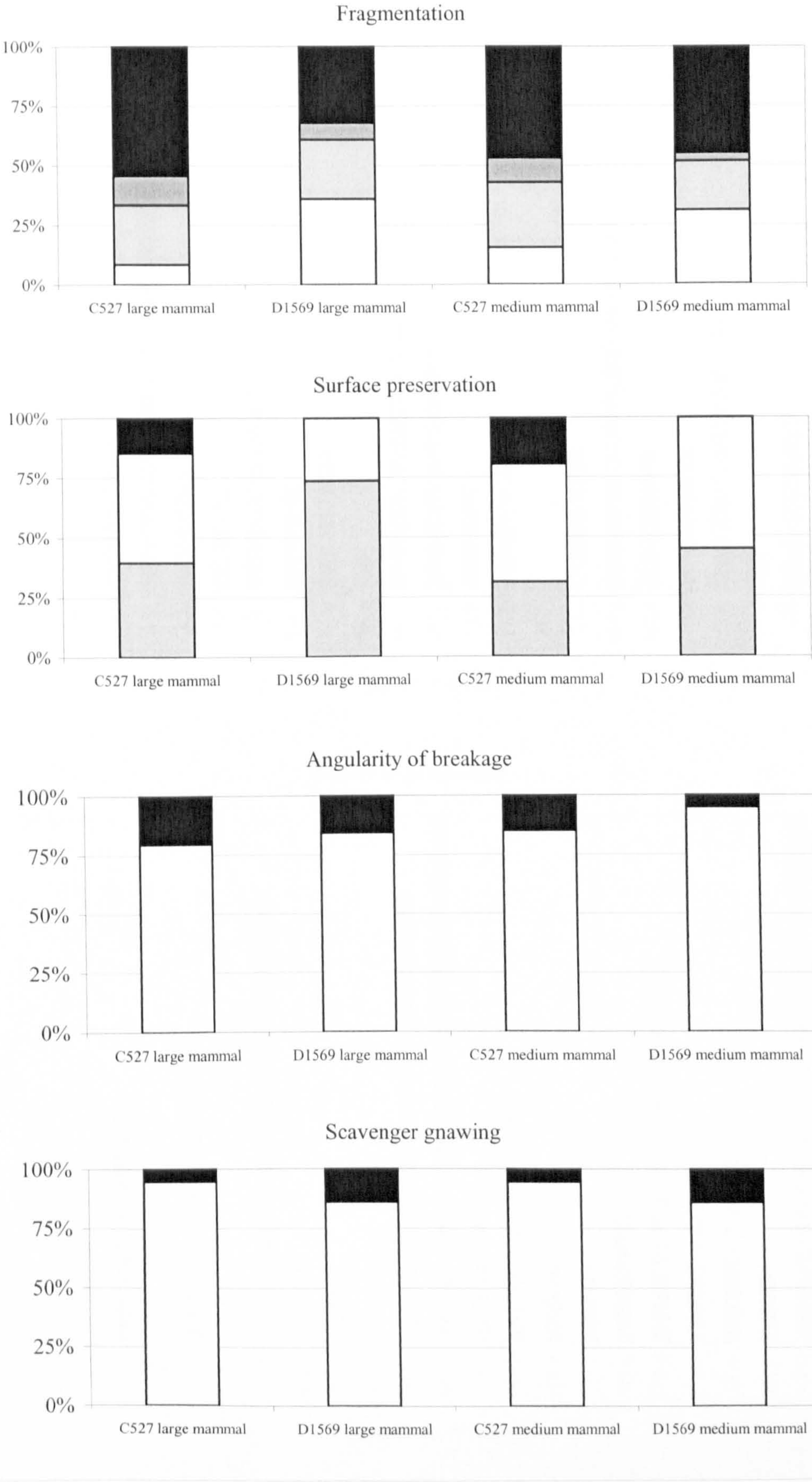


Figure 26. Deposition: C527/D1569 dump comparison: Taphonomic indicators: Fragmentation, preservation, angularity of breakage and scavenger gnawing (all phases)

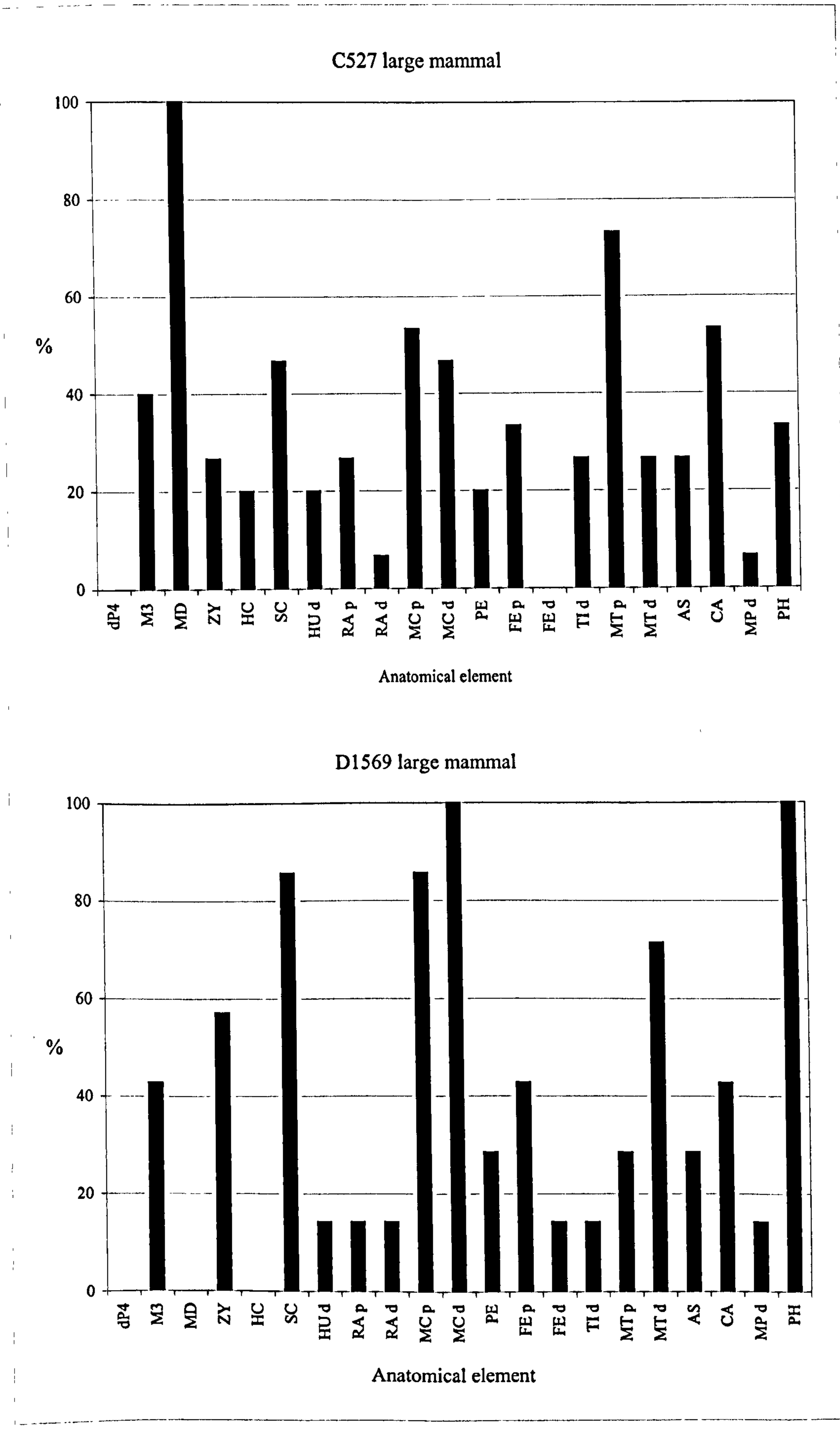


Figure 27. Deposition: C527/D1569 dump comparison: NISP anatomical representation of large and medium sized mammals

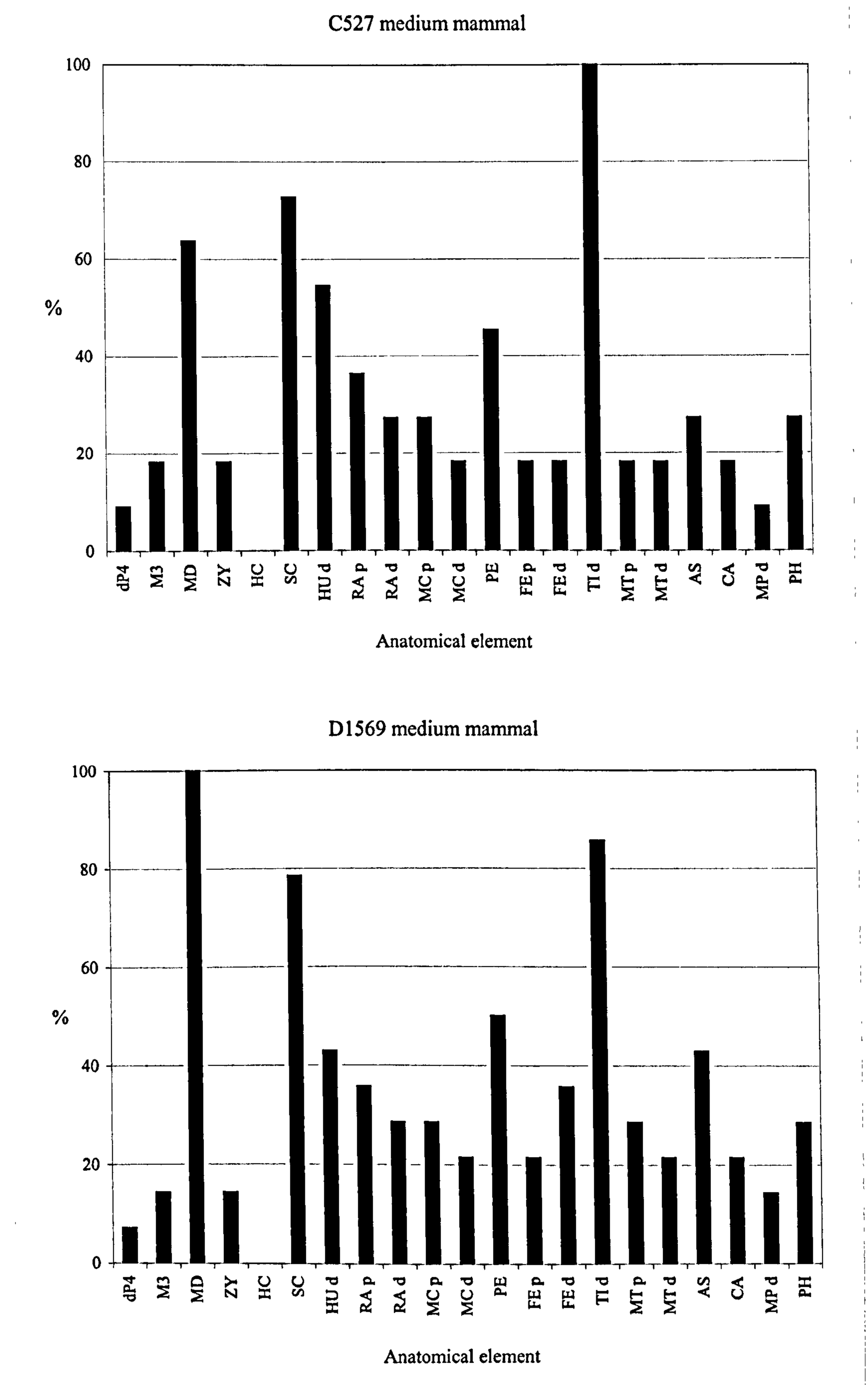
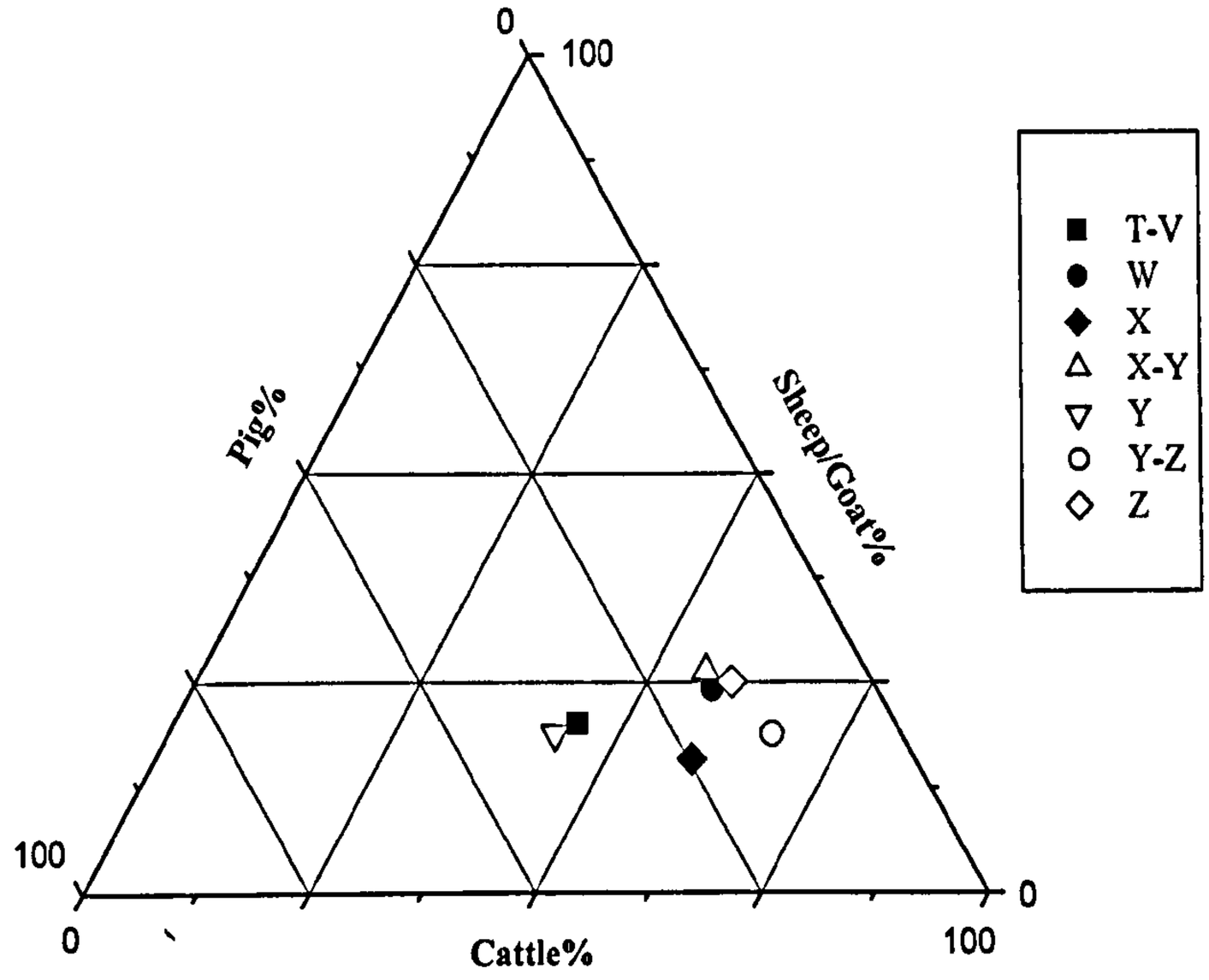


Figure 27 cont. Deposition: C527/D1569 dump comparison: NISP anatomical representation of large and medium sized mammals

MNE



Estimated live weight

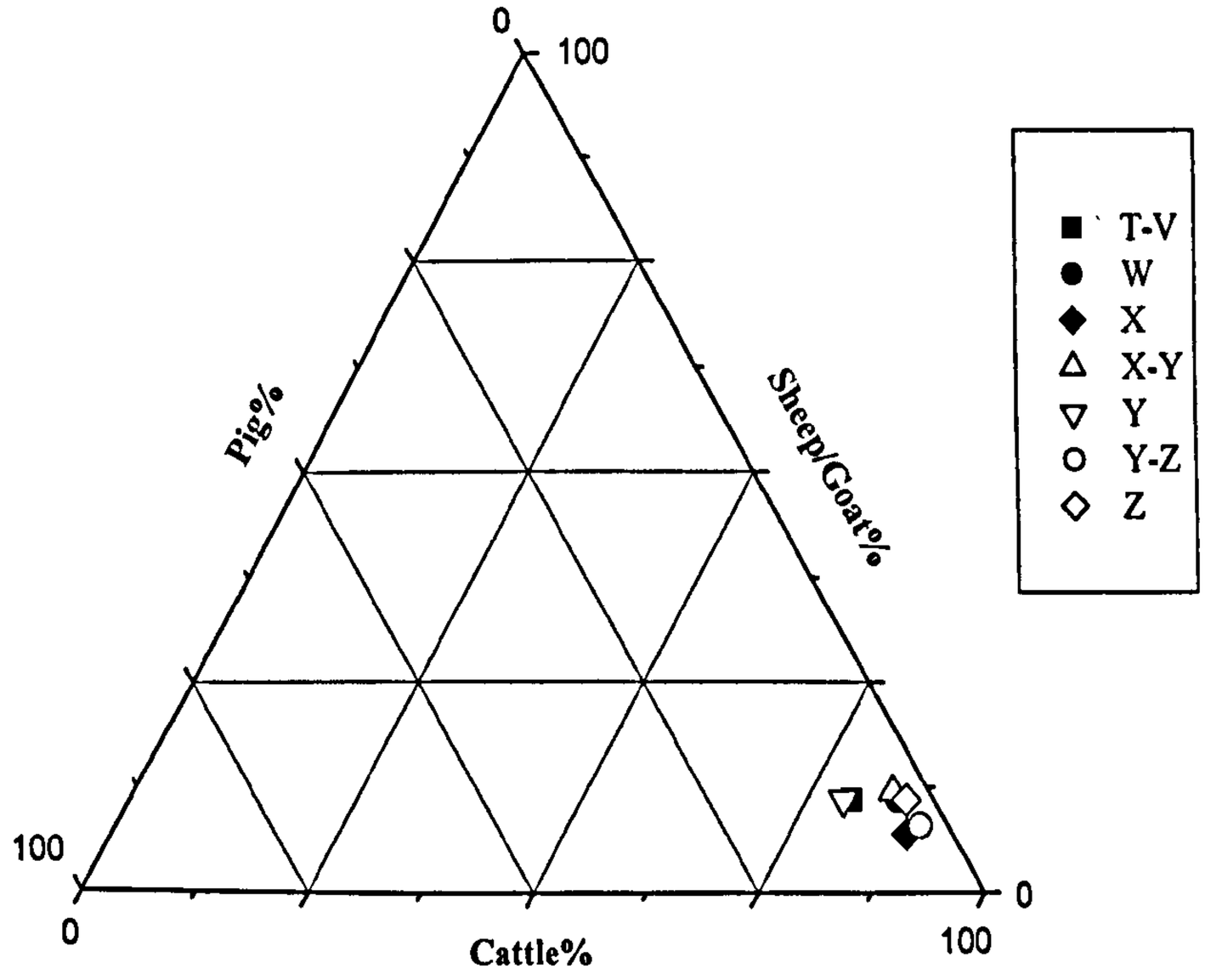
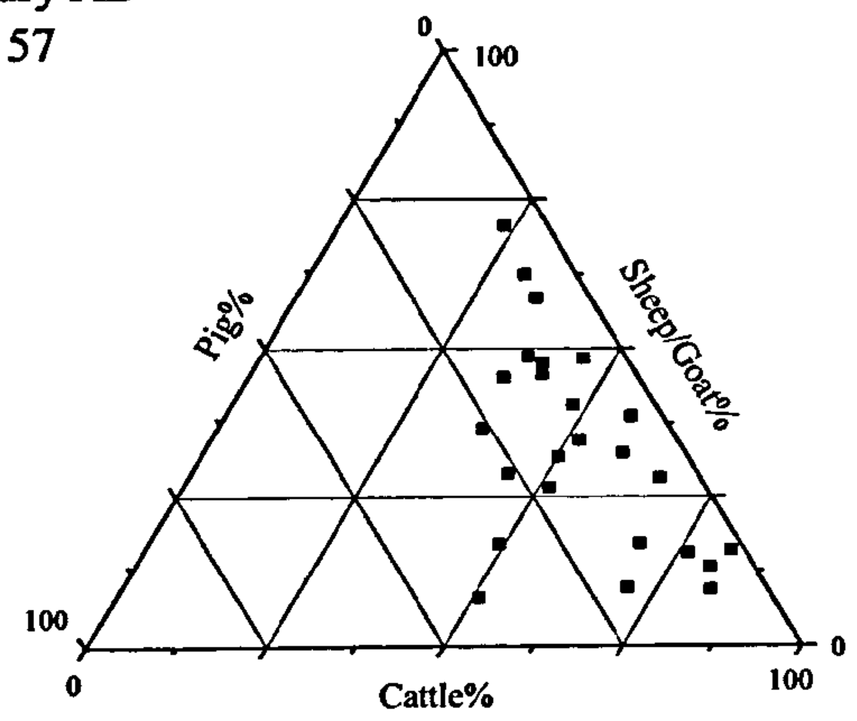
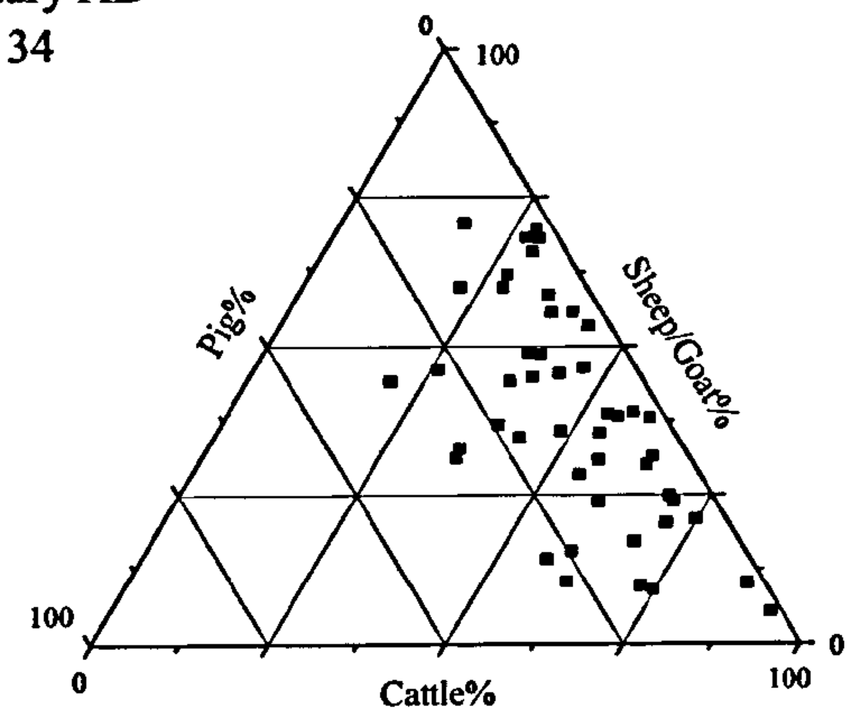


Figure 28a-b. Species composition: Relative abundance of the major domesticates using (a) MNE and (b) estimated live weight figures by chronological phase

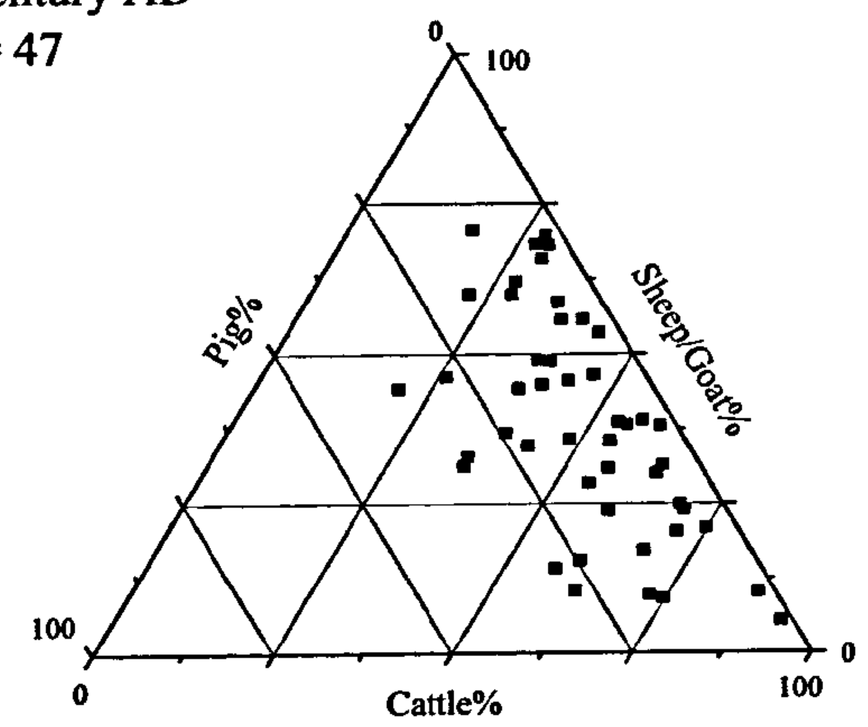
1st century AD
n = 57



2nd century AD
n = 34



1st-2nd century AD
n = 47



2nd-3rd century AD
n = 25

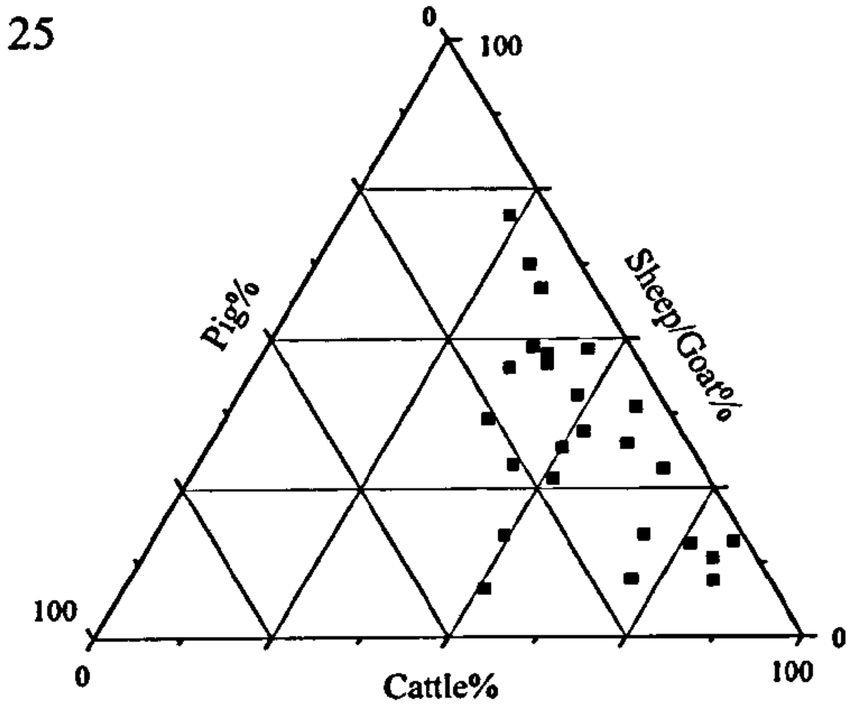
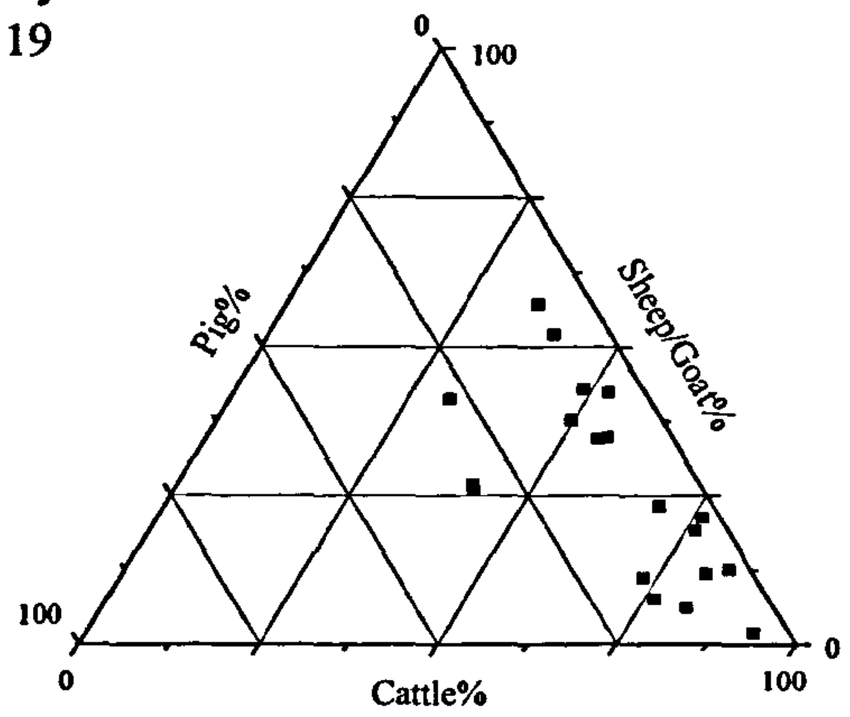
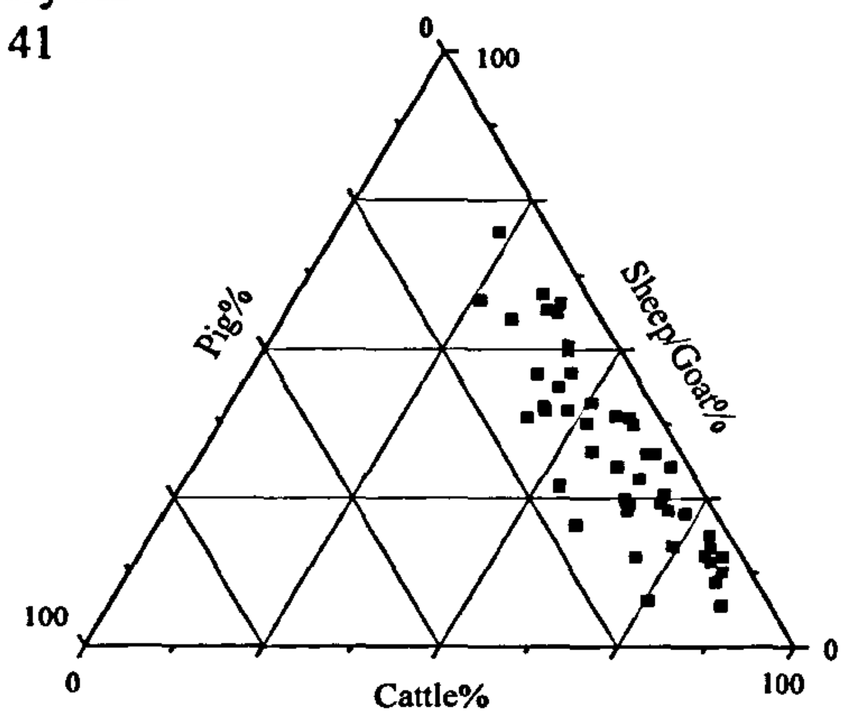


Figure 29. Species composition: Chronological inter-site comparison of relative abundance of the major domesticates, based on King (1984: 218-224, Table 4 & 1999a: 193-195, Appendix)

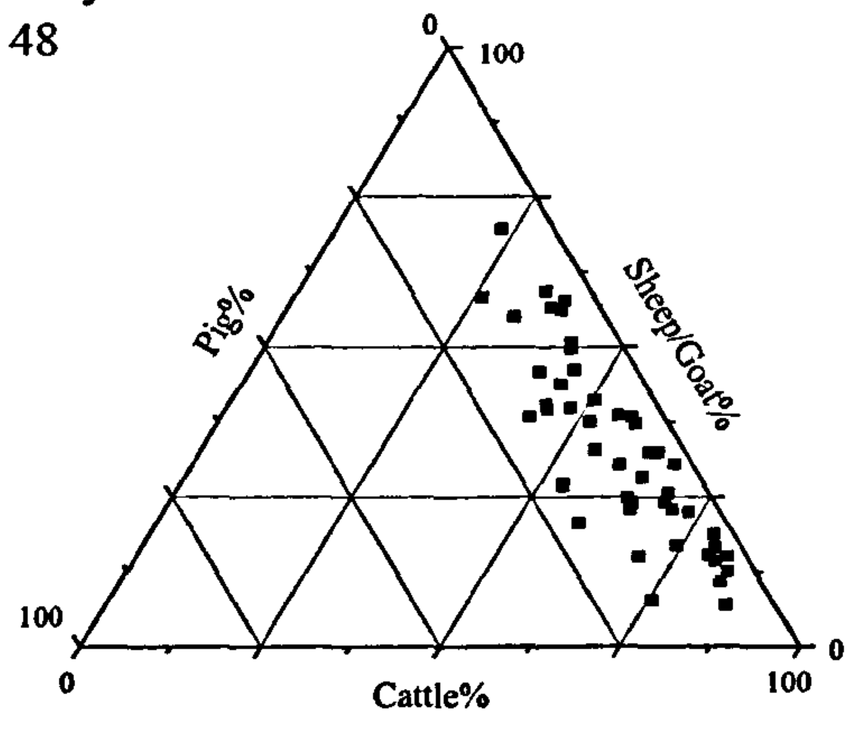
3rd century AD
n = 19



4th century AD
n = 41



3rd-4th century AD
n = 48



4th-5th century AD
n = 5

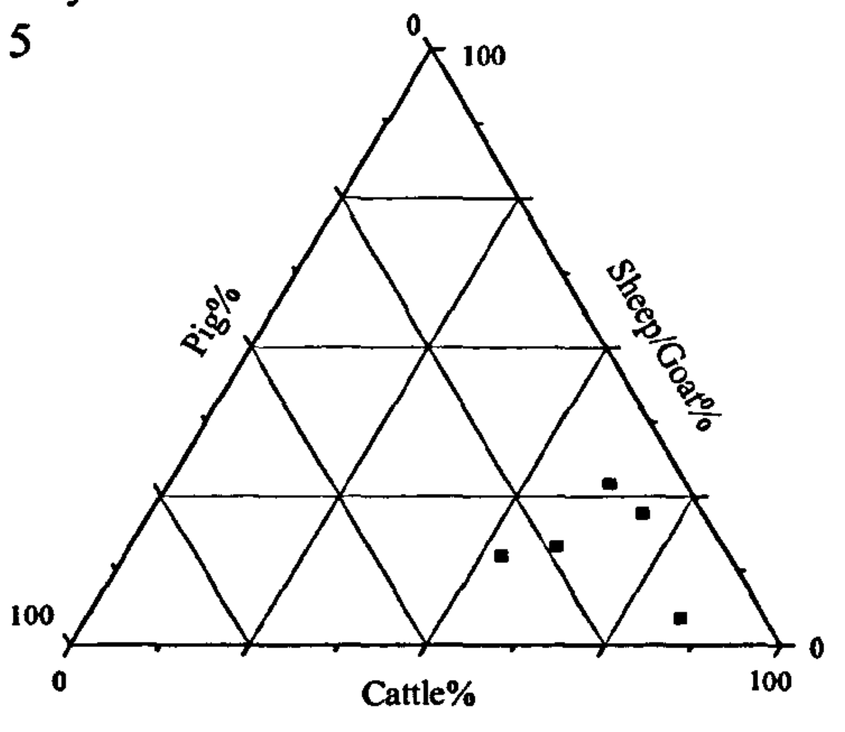
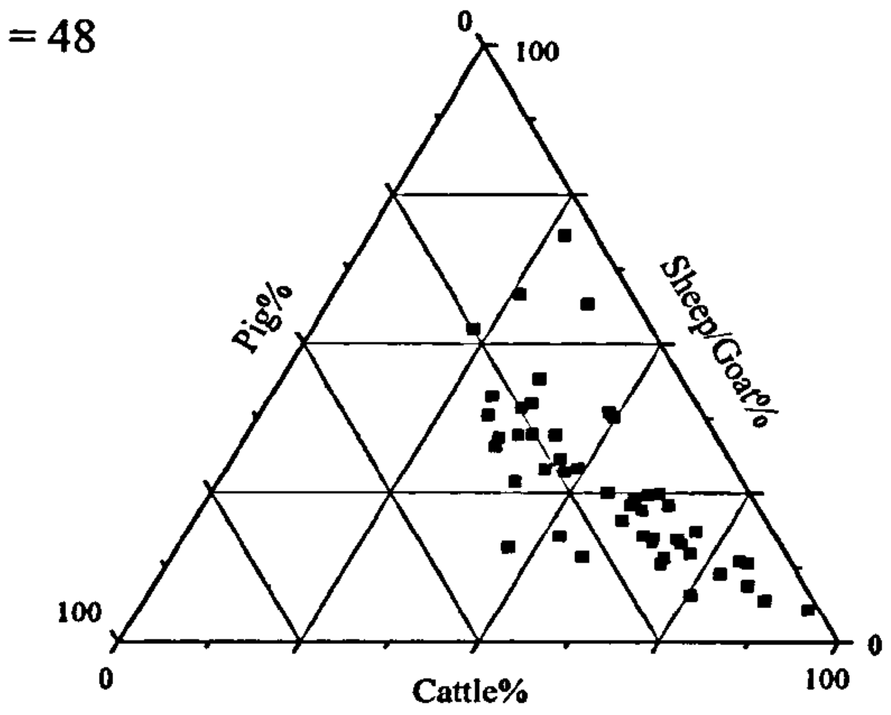
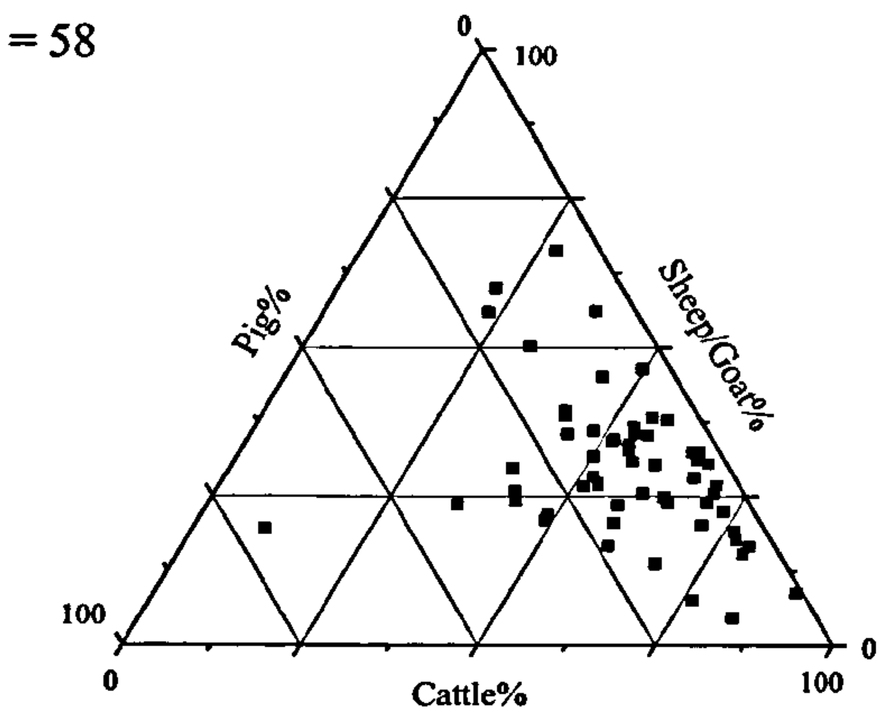


Figure 29 cont. Species composition: Chronological inter-site comparison of relative abundance of the major domesticates, based on King (1984: 218-224, Table 4 & 1999a: 193-195, Appendix)

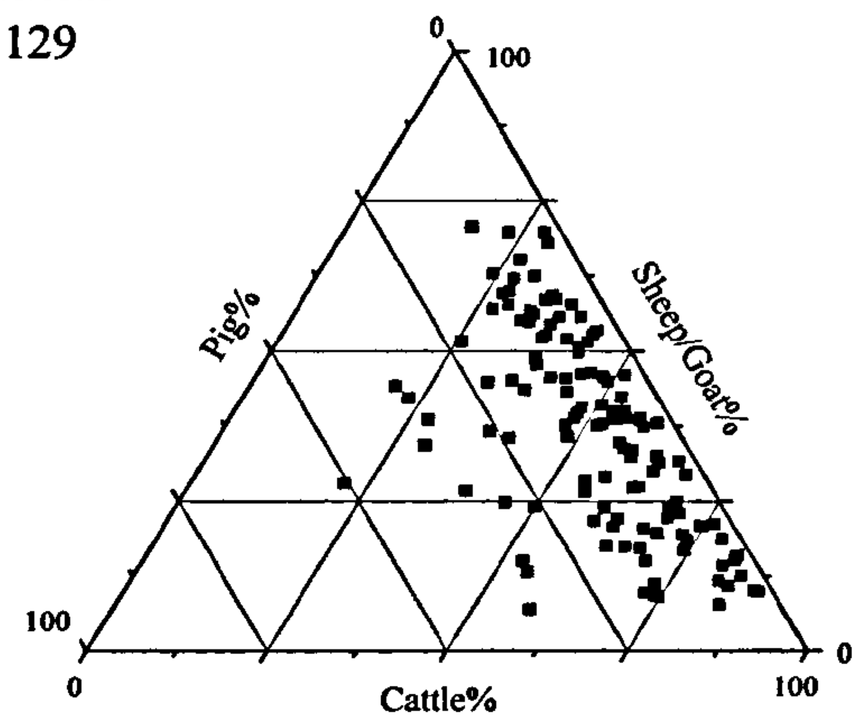
Urban settlements
n = 48



Villas
n = 58



Settlements
n = 129



Military
n = 37

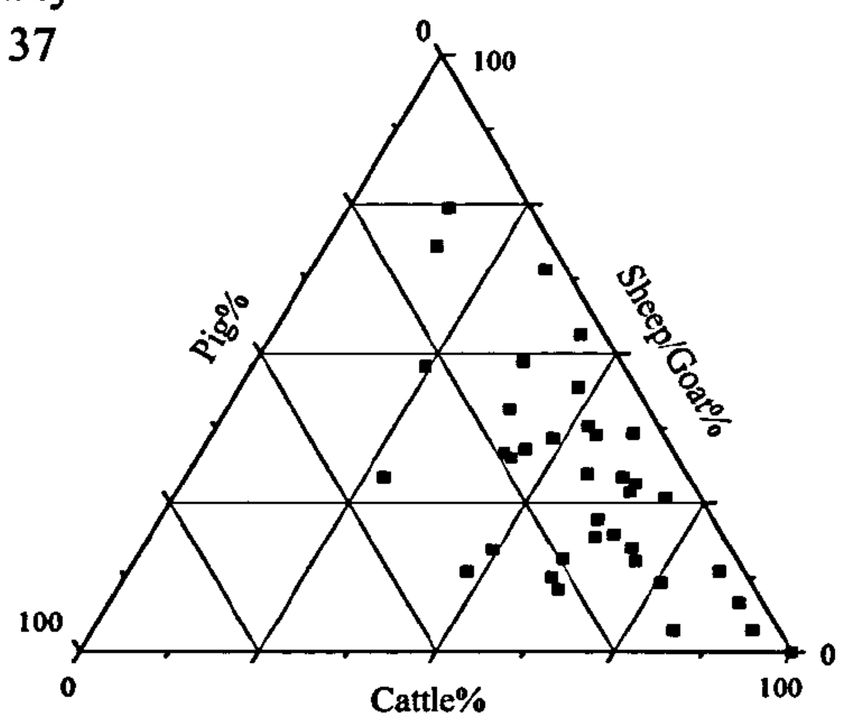
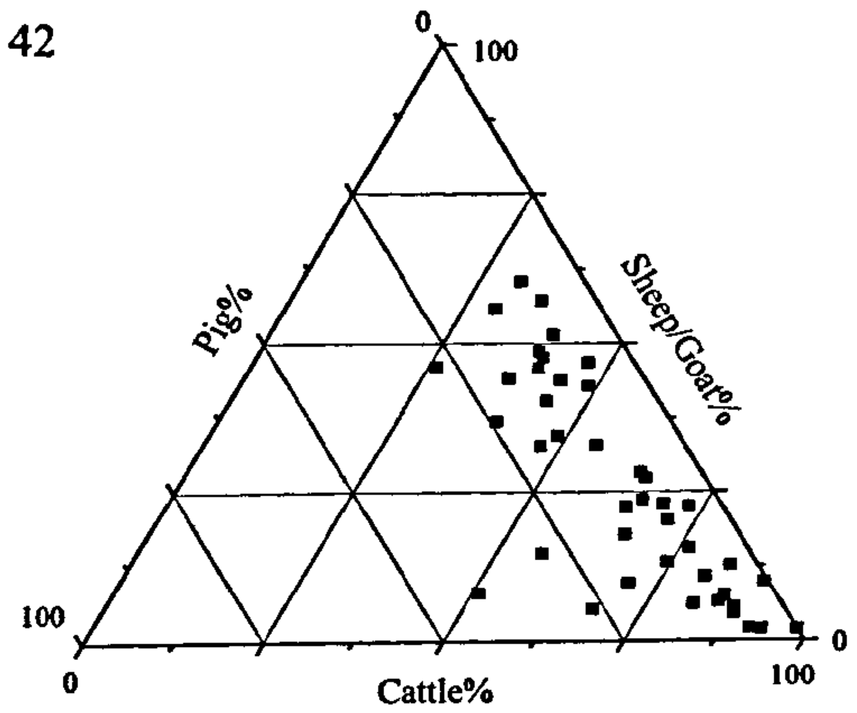


Figure 30. Species composition: Settlement type inter-site comparison of relative abundance of the major domesticates, based on King (1984: 218-224, Table 4 & 1999a: 193-195, Appendix)

Vicus/Canabae
n = 42



Industrial
n = 13

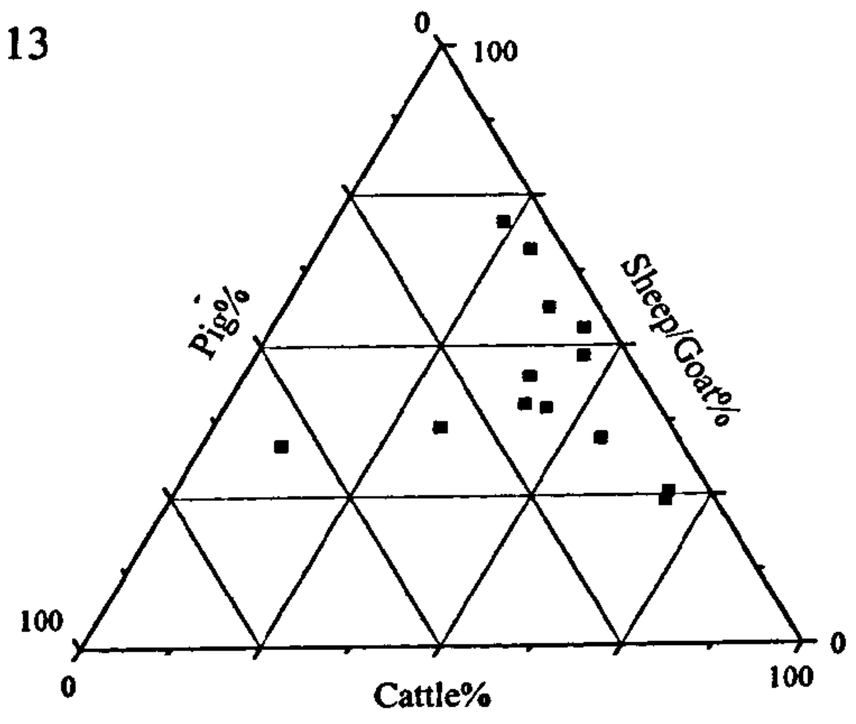


Figure 30 cont. Species composition: Settlement type inter-site comparison of relative abundance of the major domesticates, based on King (1984: 218-224, Table 4 & 1999a: 193-195, Appendix)

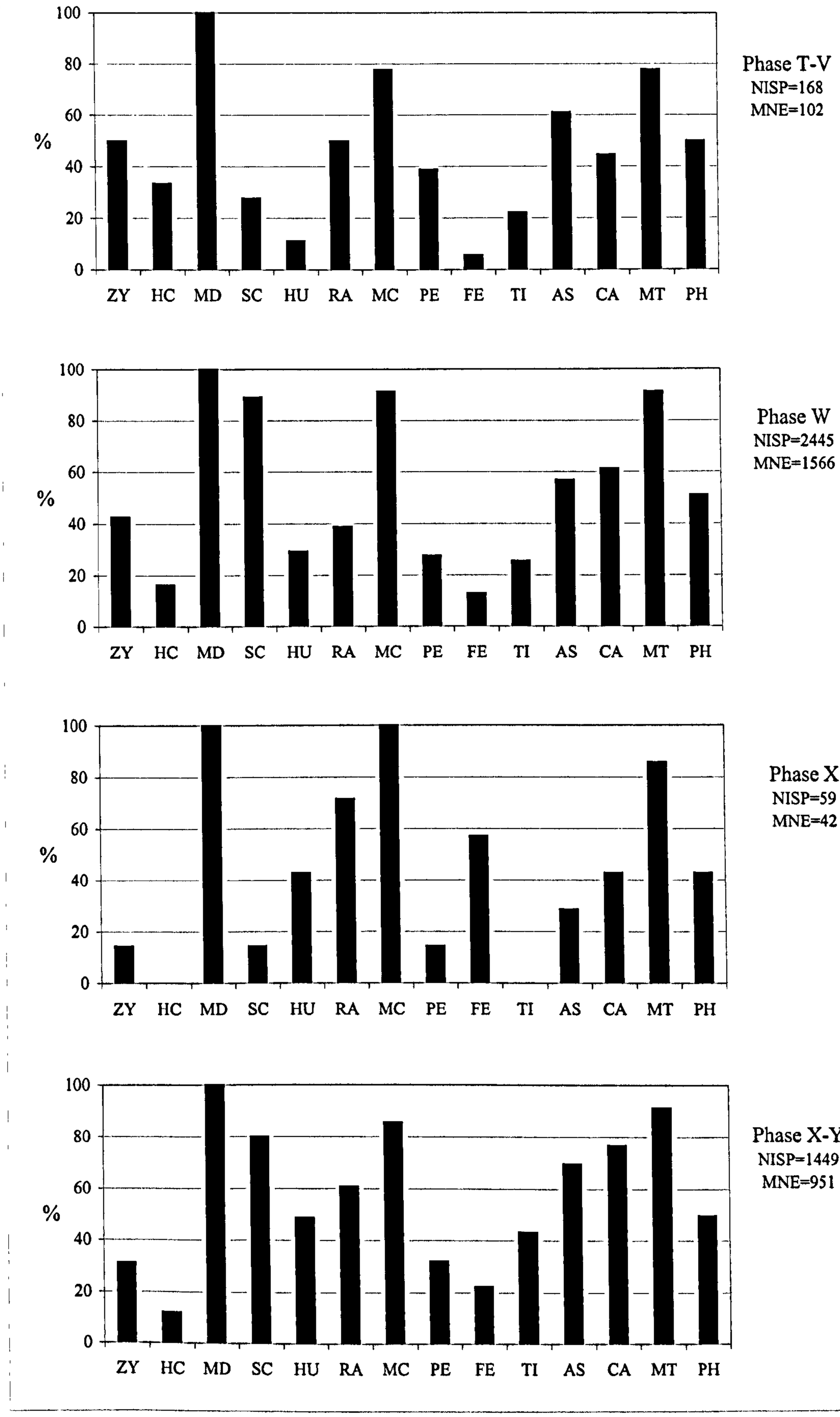
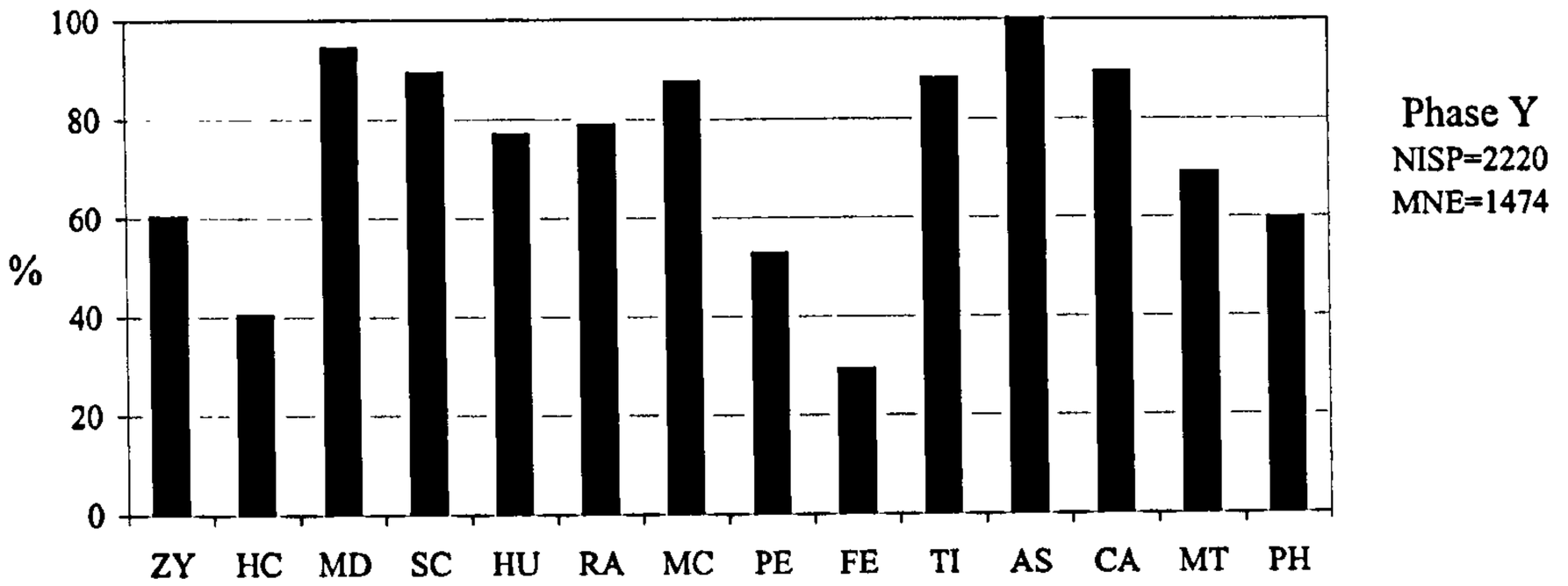
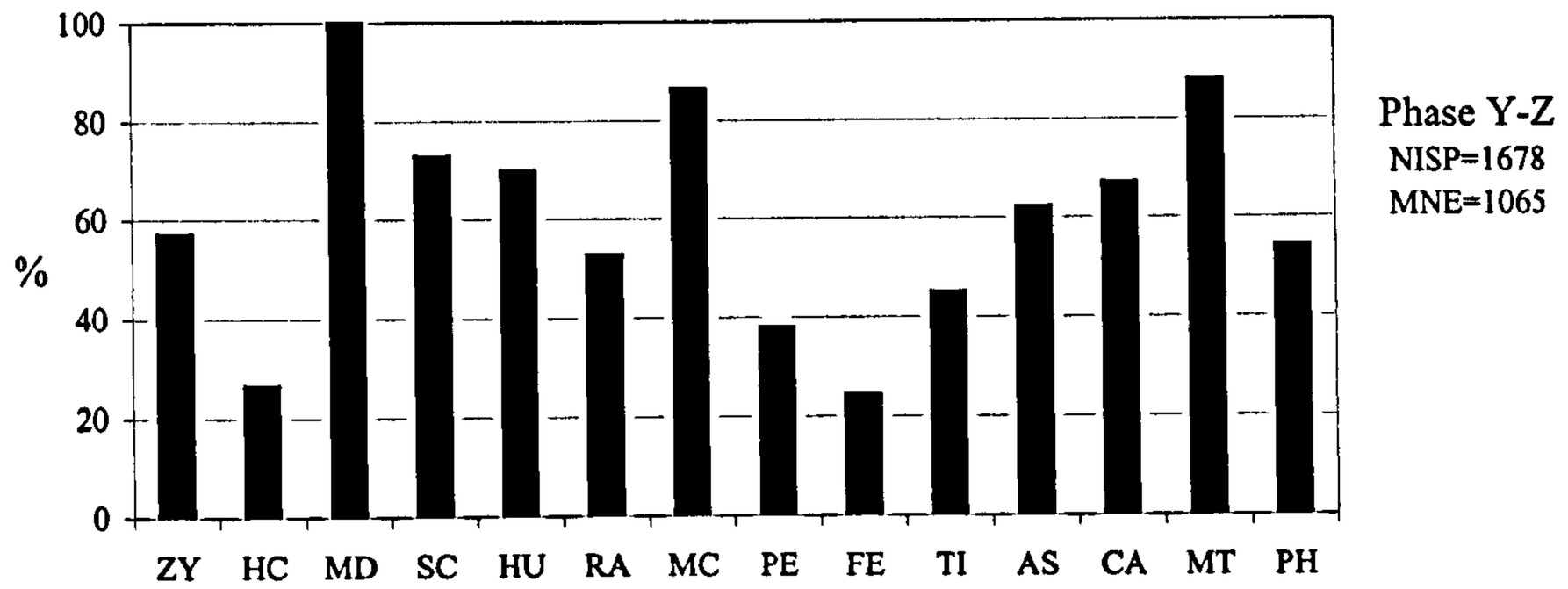


Figure 31. Cattle: Anatomical representation: MNE by chronological phase expressed as %MNI





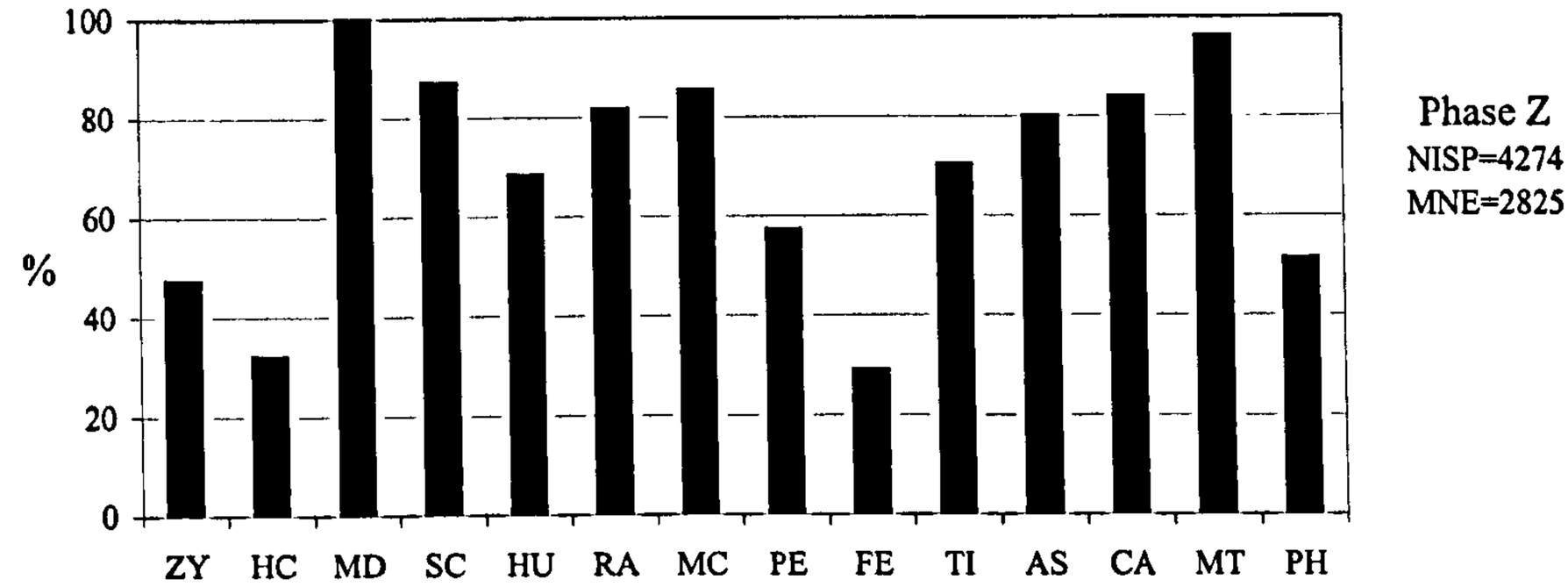


Figure 31 cont. Cattle: Anatomical representation: MNE by chronological phase expressed as %MNI

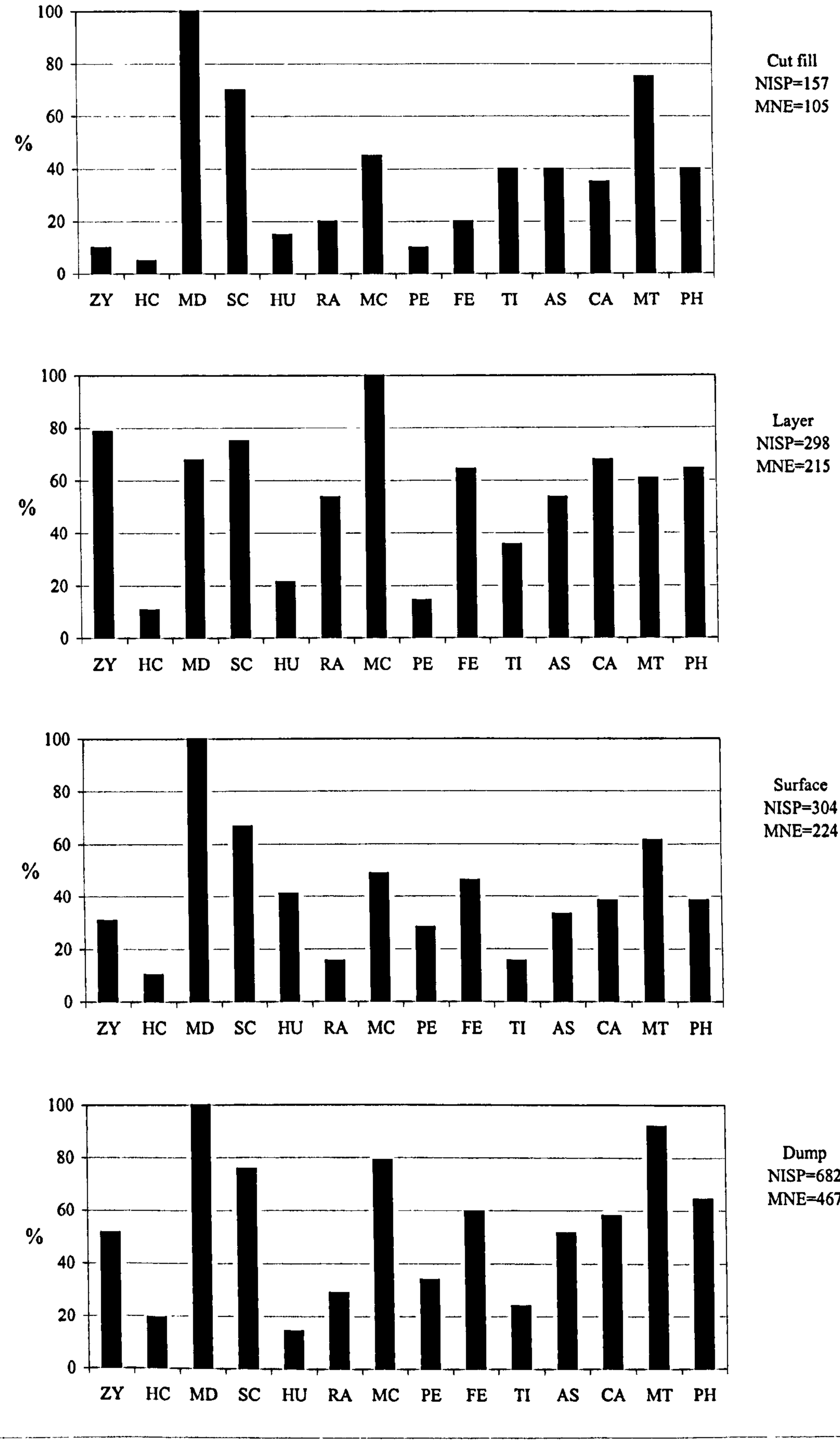
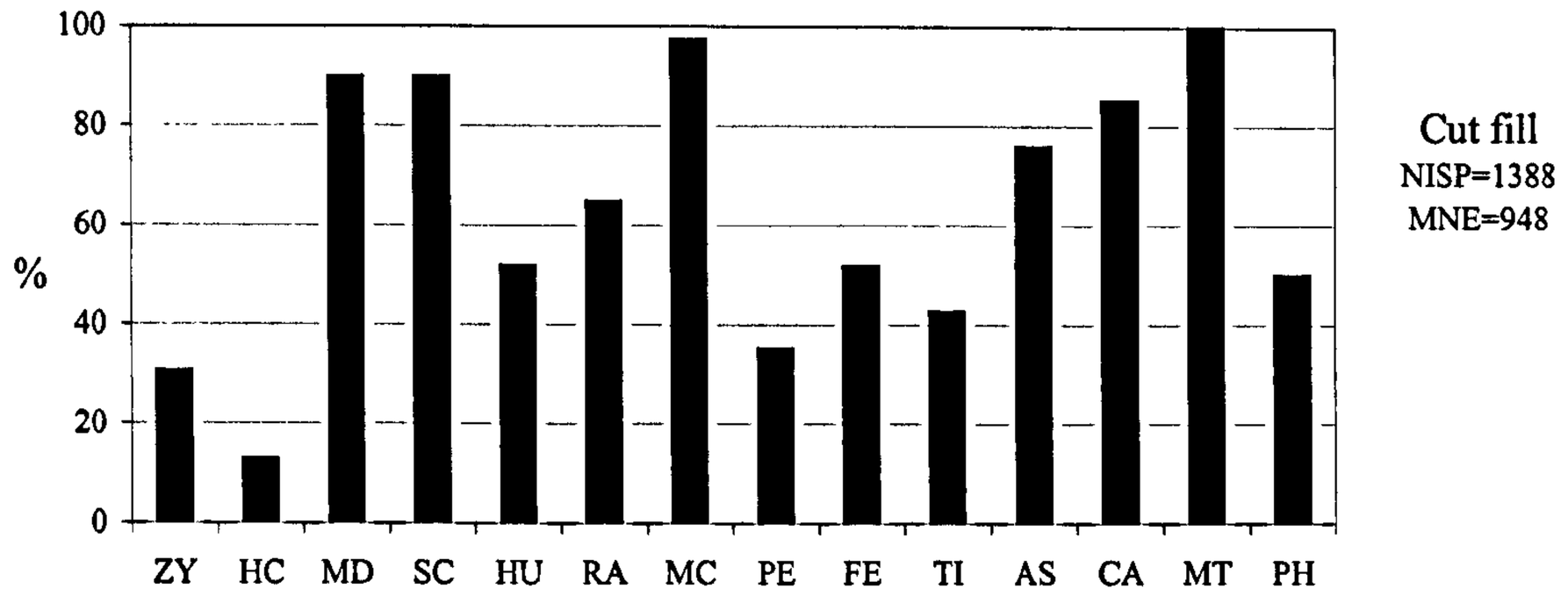


Figure 32. Cattle: Anatomical representation: Phase W: MNE by feature type expressed as %MNI



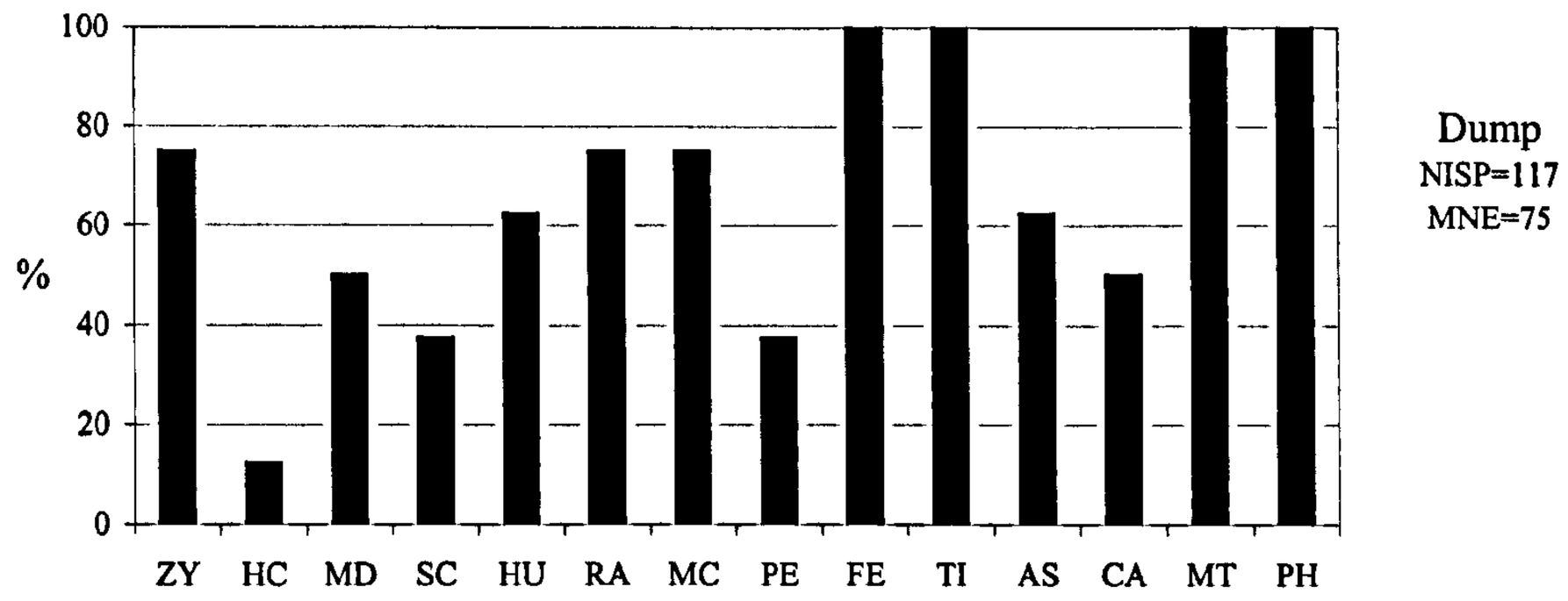


Figure 33. Cattle: Anatomical representation: Phase X-Y: MNE by feature type expressed as %MNI

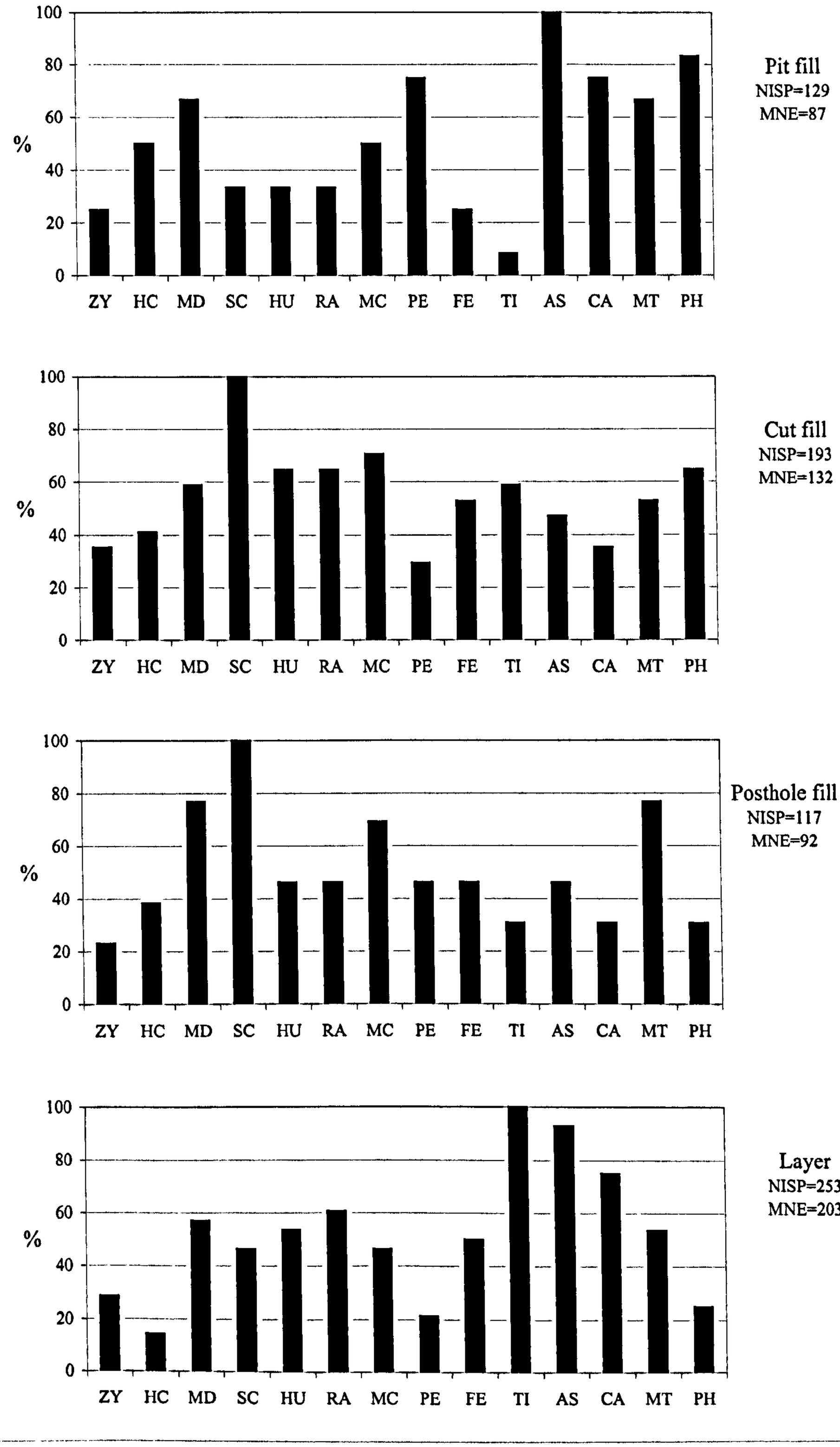


Figure 34. Cattle: Anatomical representation: Phase Y: MNE by feature type expressed as %MNI

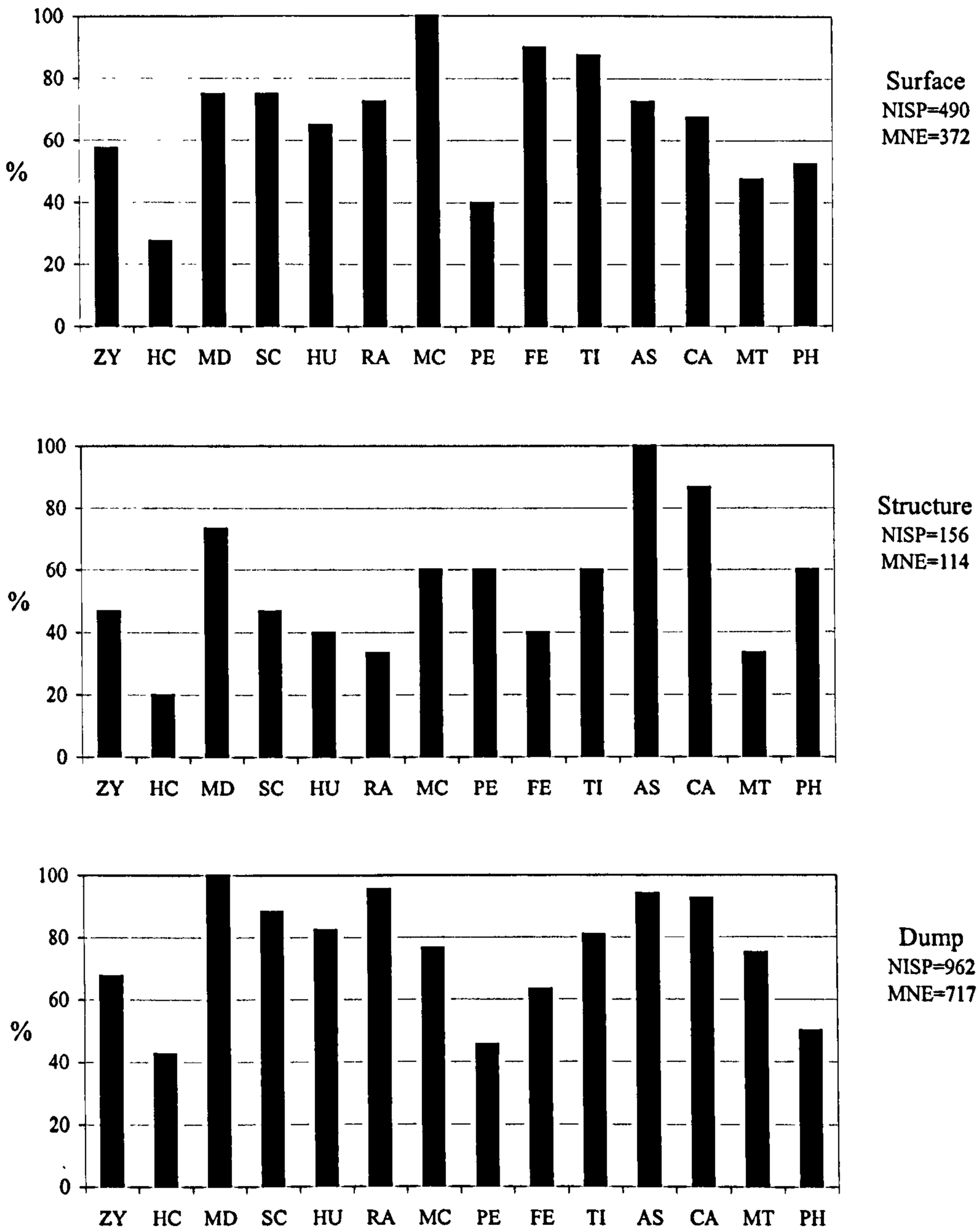


Figure 34 cont. Cattle: Anatomical representation: Phase Y: MNE by feature type expressed as %MNI

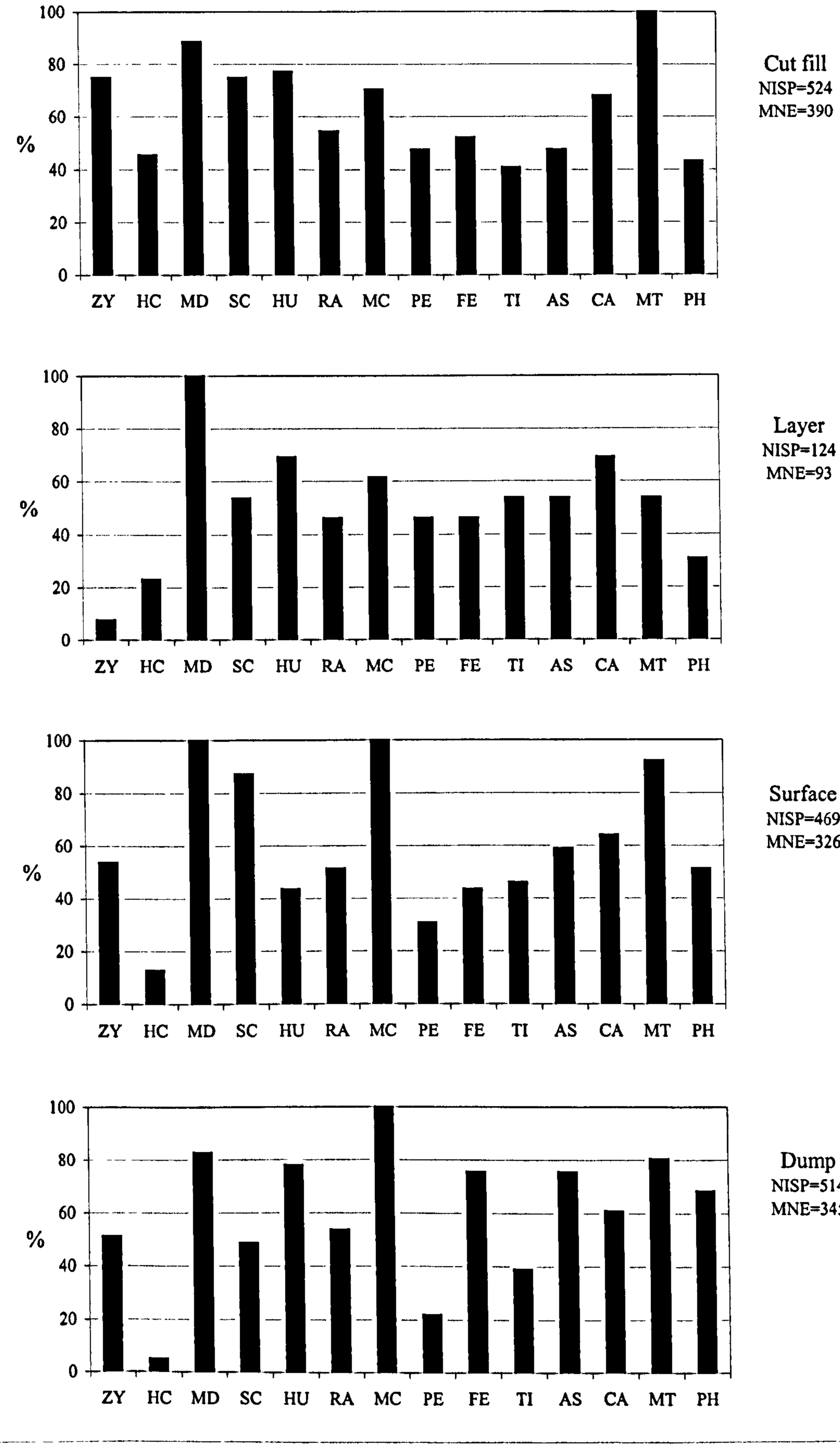


Figure 35. Cattle: Anatomical representation: Phase Y-Z: MNE by feature type expressed as %MNI

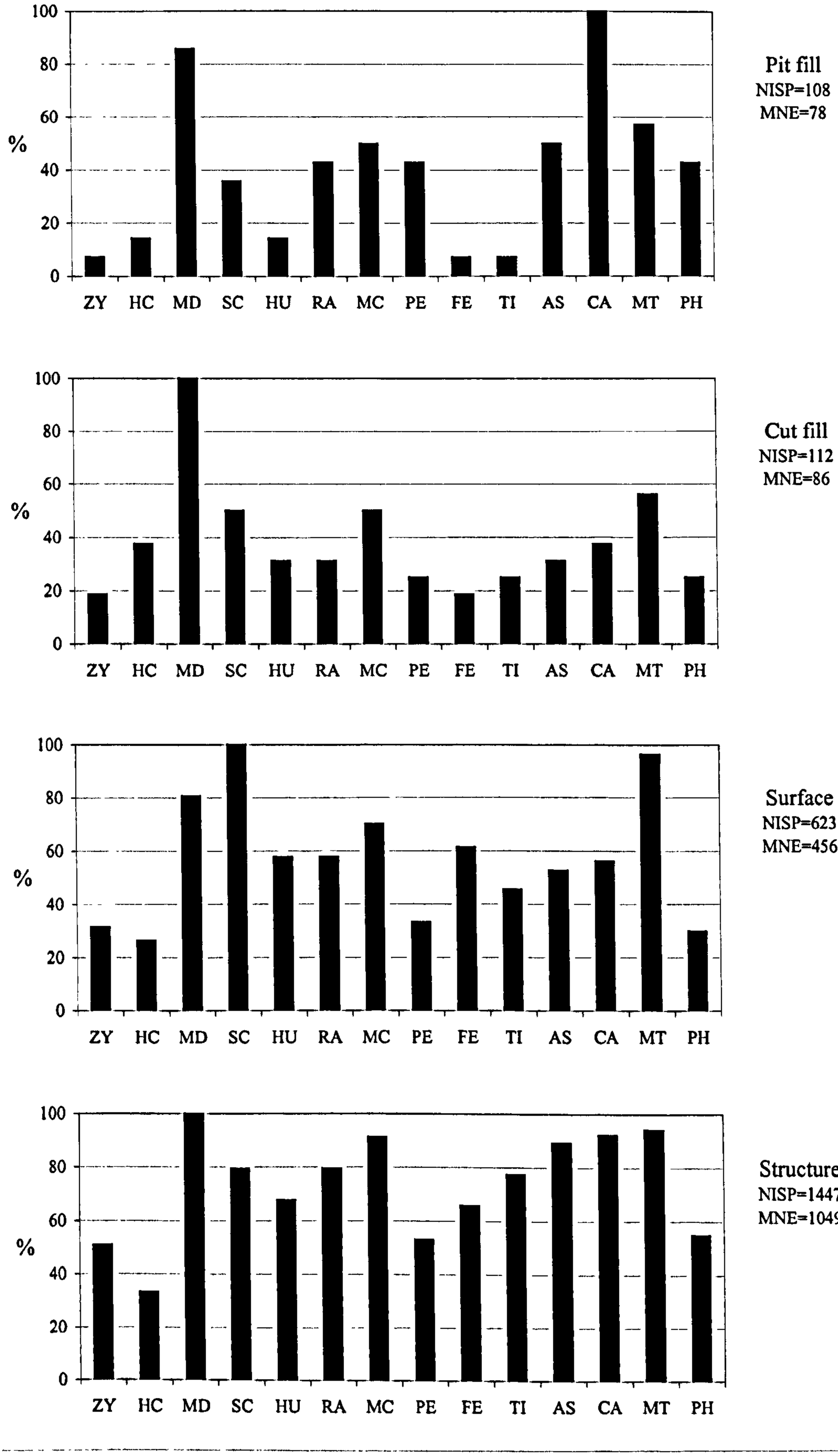


Figure 36. Cattle: Anatomical representation: Phase Z: MNE by feature type expressed as %MNI

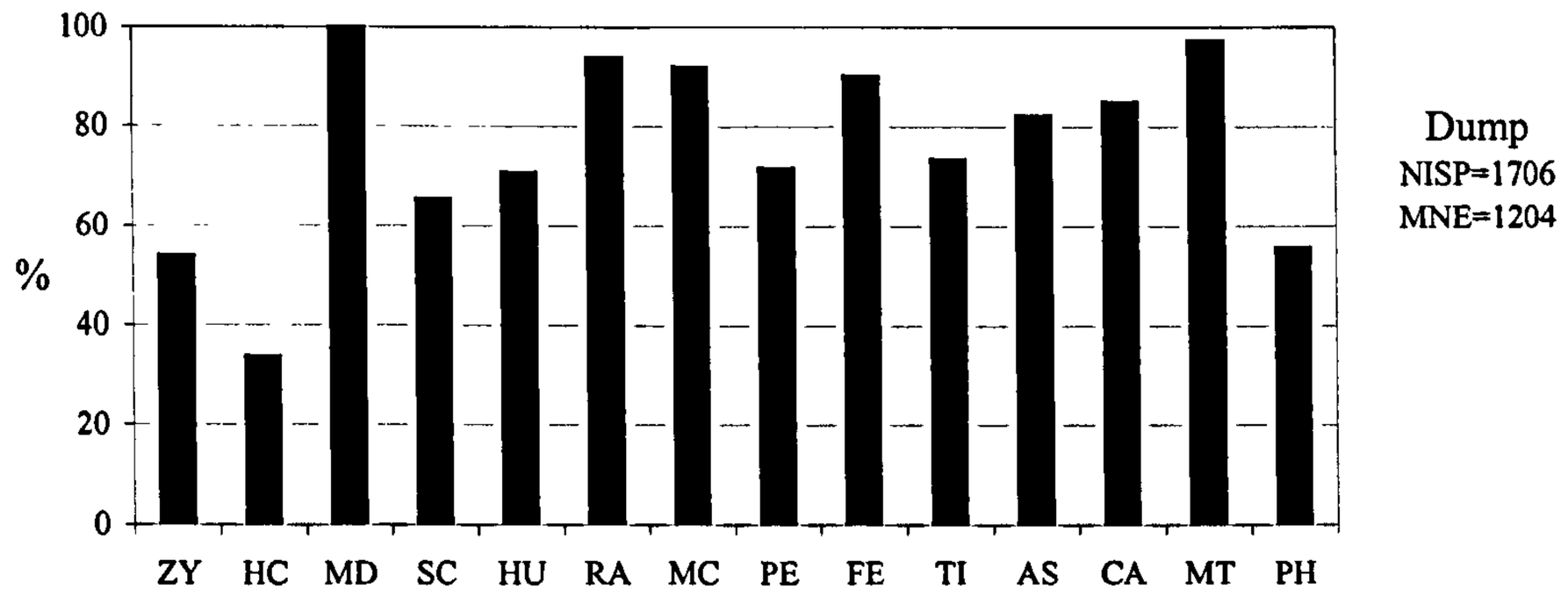


Figure 36 cont. Cattle: Anatomical representation: Phase Z: MNE by feature type expressed as %MNI

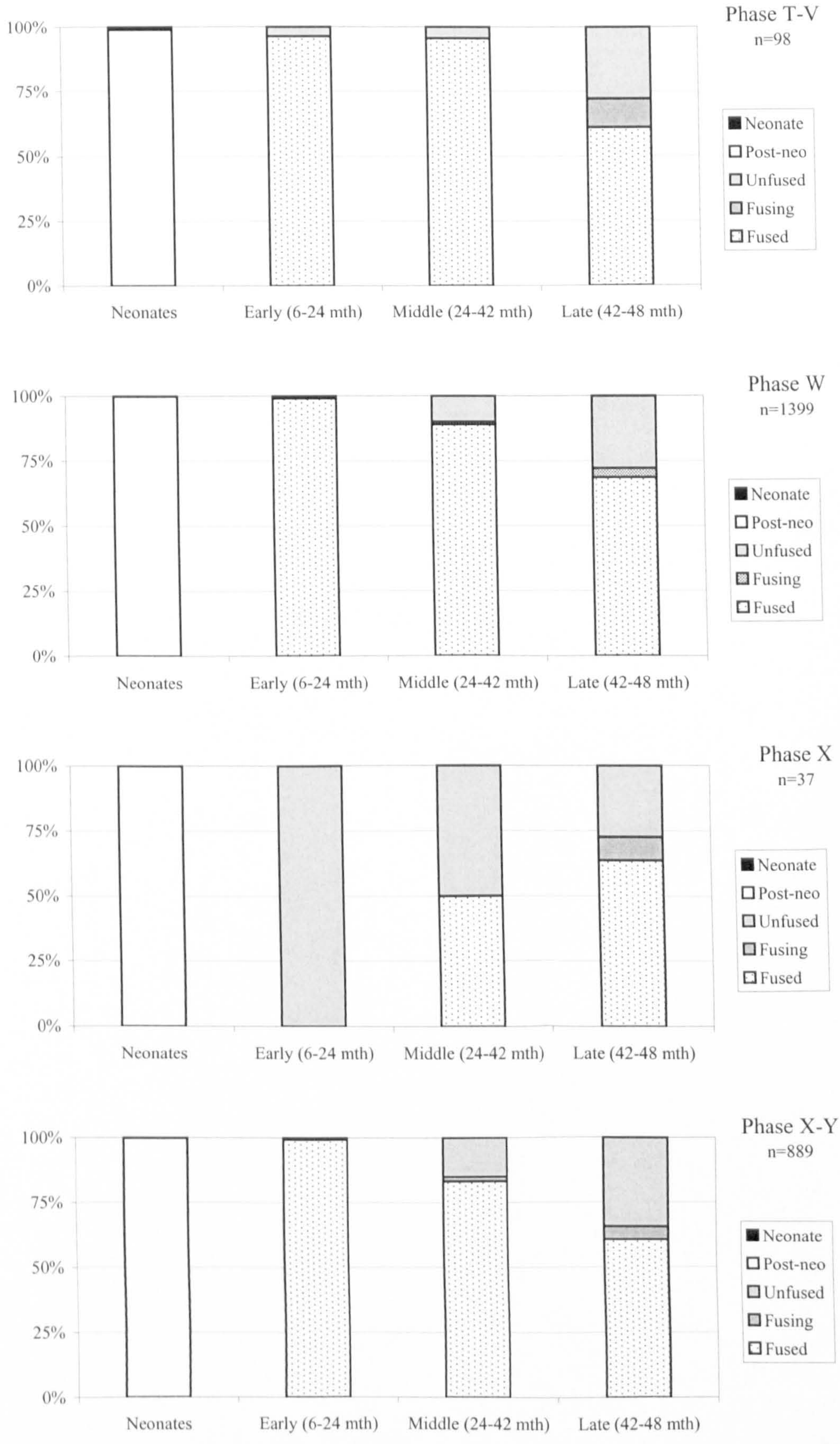


Figure 37. Cattle: Mortality profiles: Post-cranial epiphyseal fusion by chronological phase, based on Schmid (1972: 75, Table 9) and Silver (1969: 252-253, Table A)

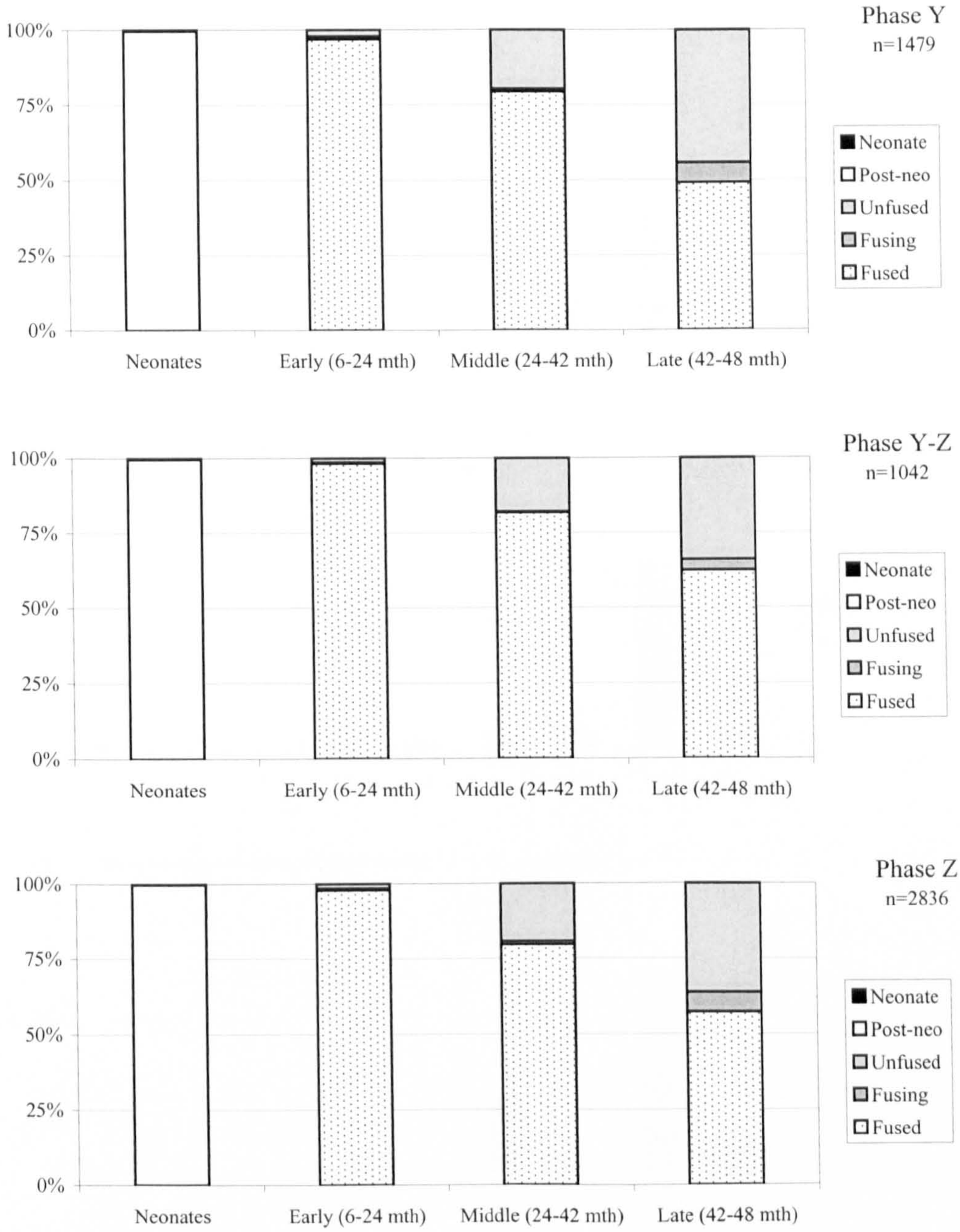


Figure 37 cont. Cattle: Mortality profiles: Post-cranial epiphyseal fusion by chronological phase, based on Schmid (1972: 75, Table 9) and Silver (1969: 252-253, Table A)

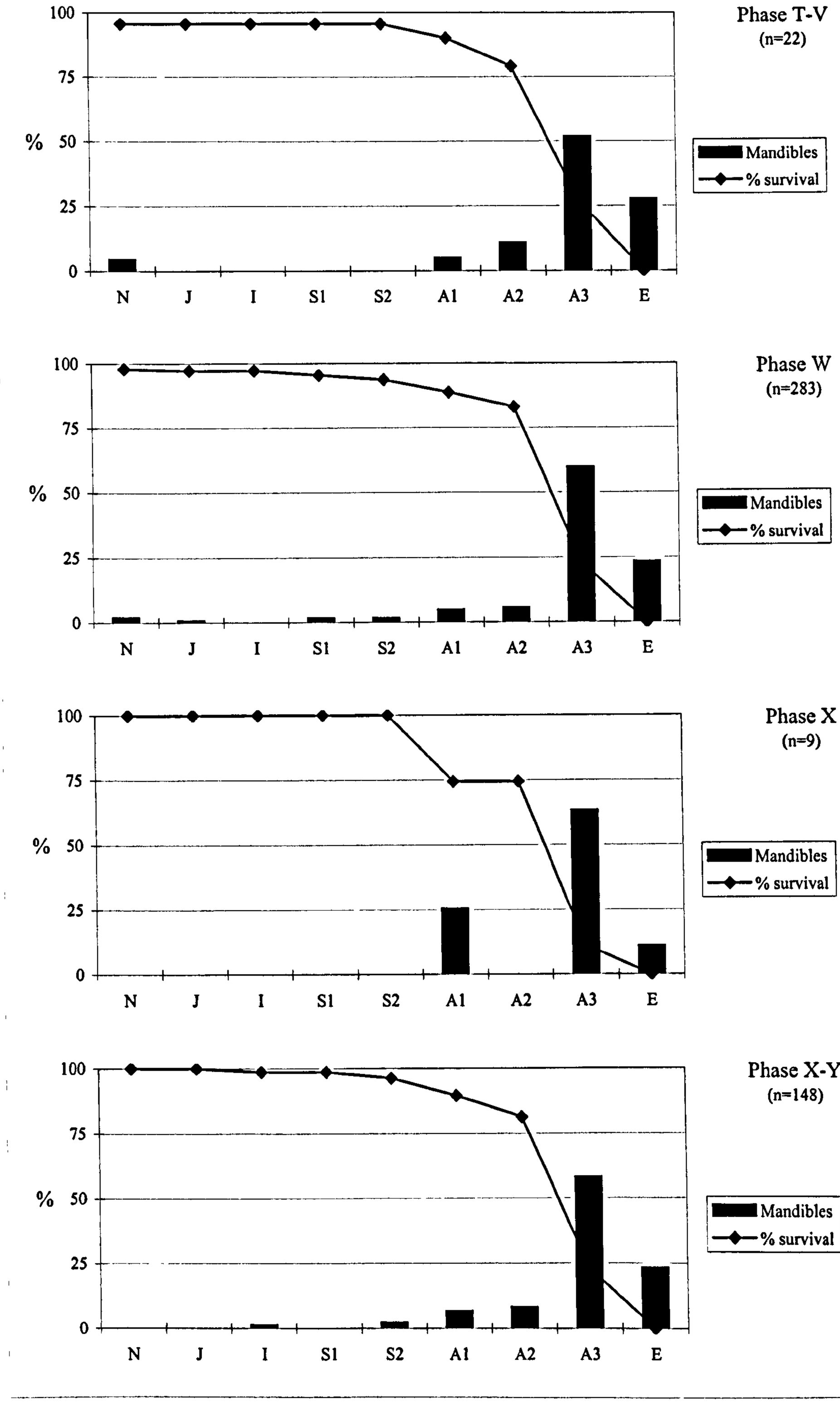


Figure 38. Cattle: Mortality profiles: Mandibular tooth eruption and wear by chronological phase, based on Grant (1982), O'Connor (1991: 250, Table 67; 2003: 160) and Silver (1969: 262, Table D)

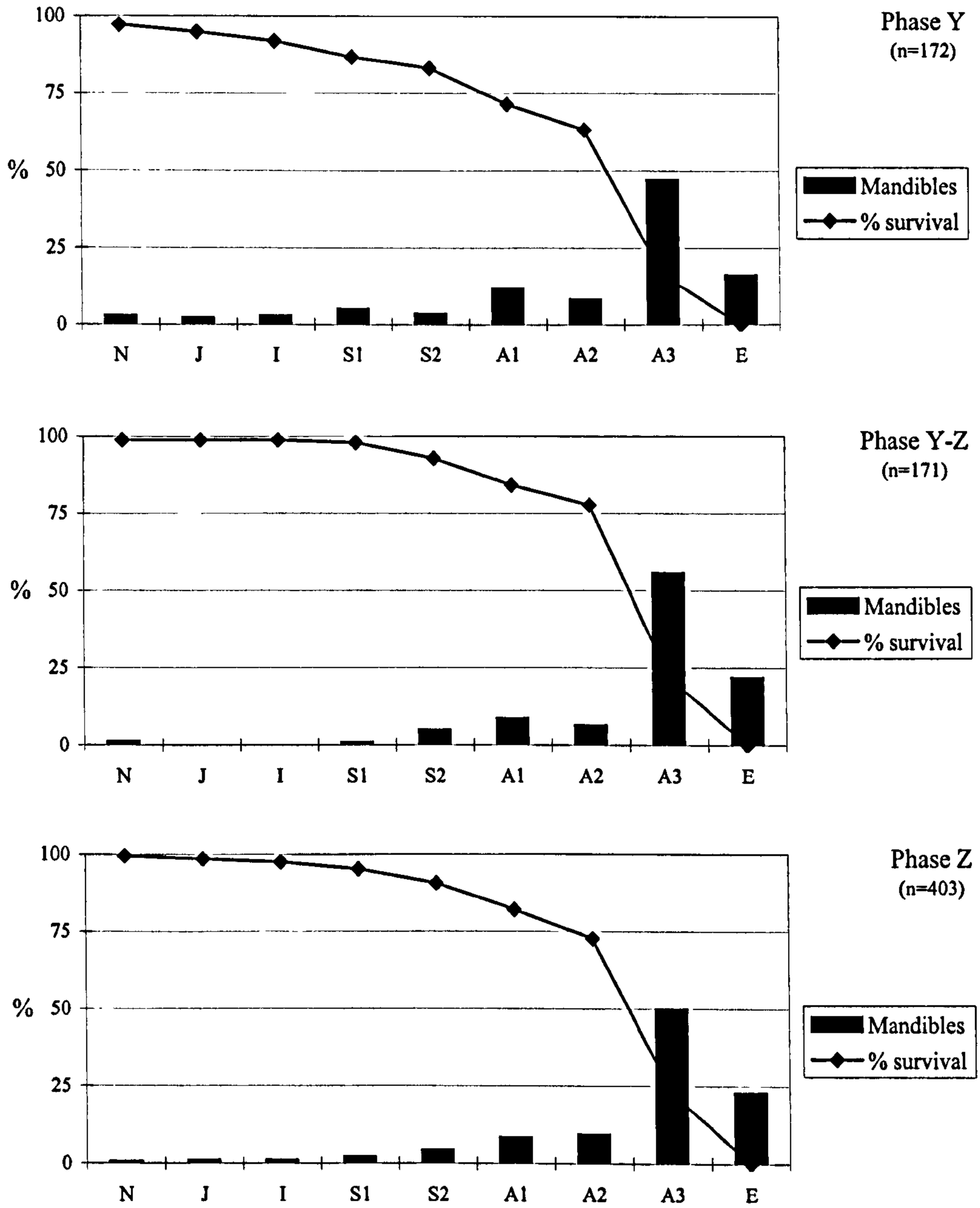


Figure 38 cont. Cattle: Mortality profiles: Mandibular tooth eruption and wear by chronological phase, based on Grant (1982), O'Connor (1991: 250, Table 67; 2003: 160) and Silver (1969: 262, Table D)

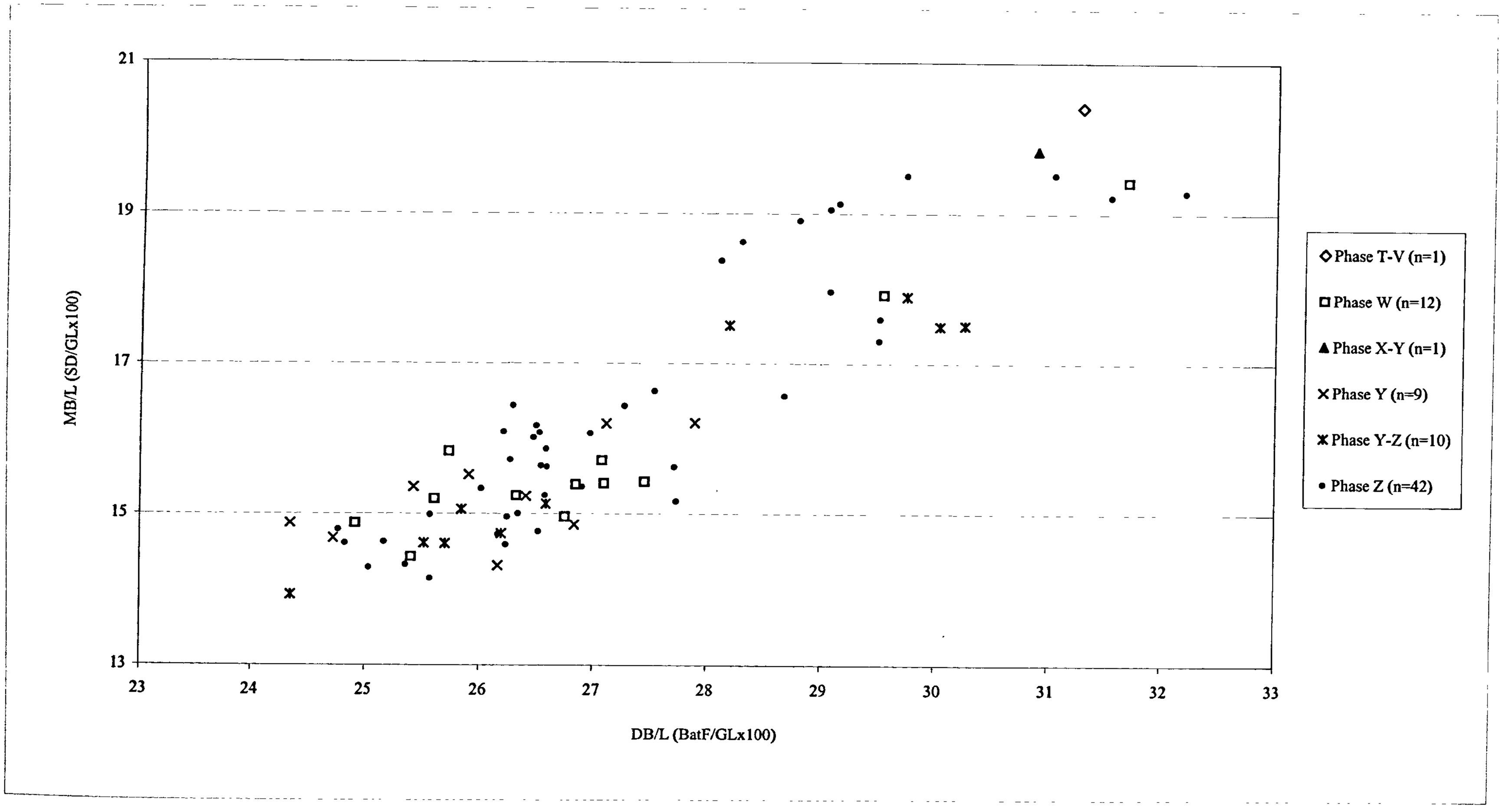


Figure 39. Cattle: Sexing: Metacarpal shape indices: MB/L (mid-breadth = SD/GLx100) against DB/L (distal breadth = BatF/GLx100) by chronological phase, based on Howard (1963[#567])

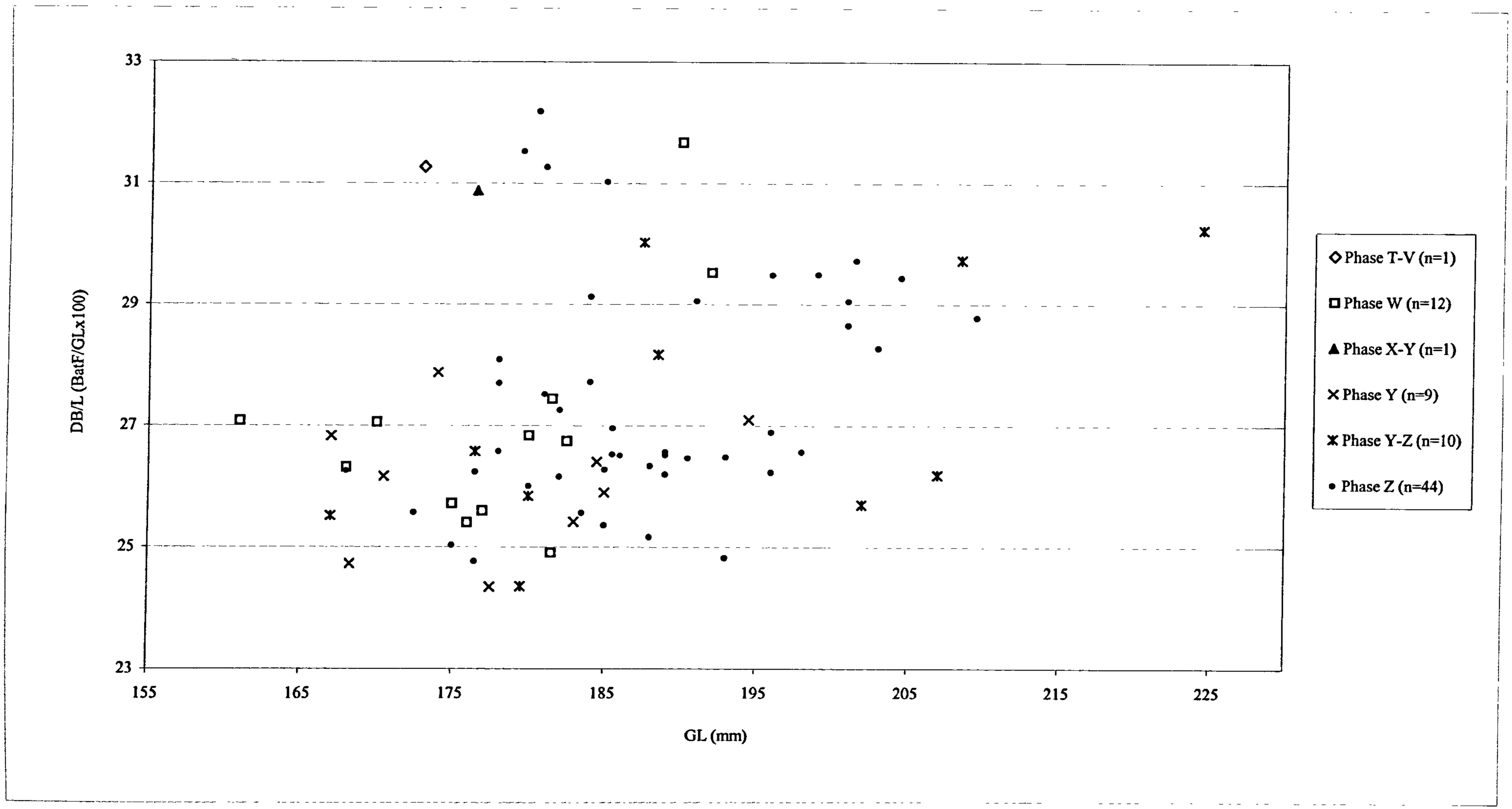


Figure 40. Cattle: Sexing: Metacarpal shape indices DB/L (distal breadth = BatF/GLx100) against GL by chronological phase, based on Howard (1963)

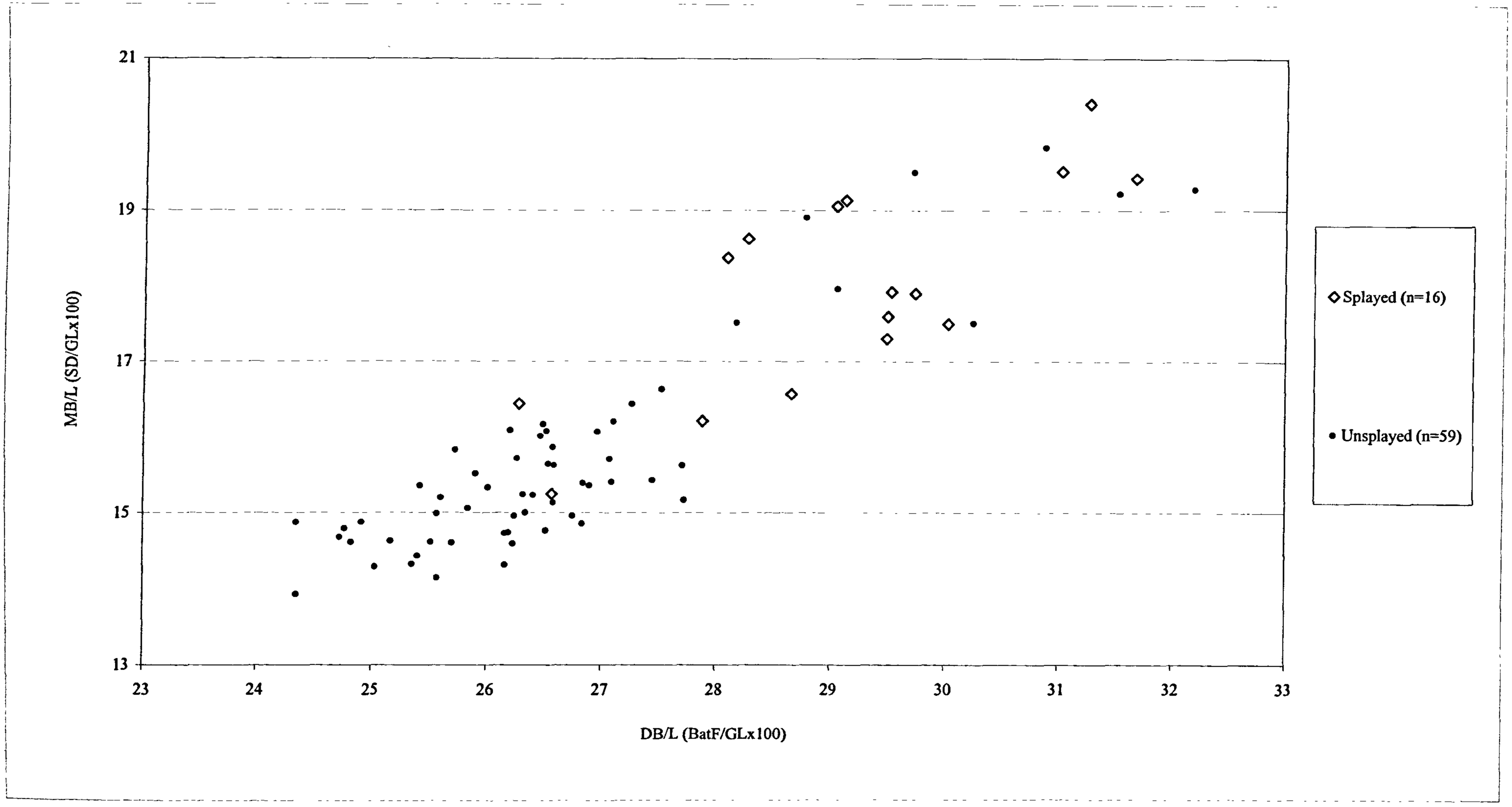


Figure 41. Cattle: Sexing: Metacarpal shape indices: MB/L (mid-breadth = SD/GLx100) against DB/L (distal breadth = BatF/GLx100), based on Howard (1963[#567]), annotated with condyle splaying

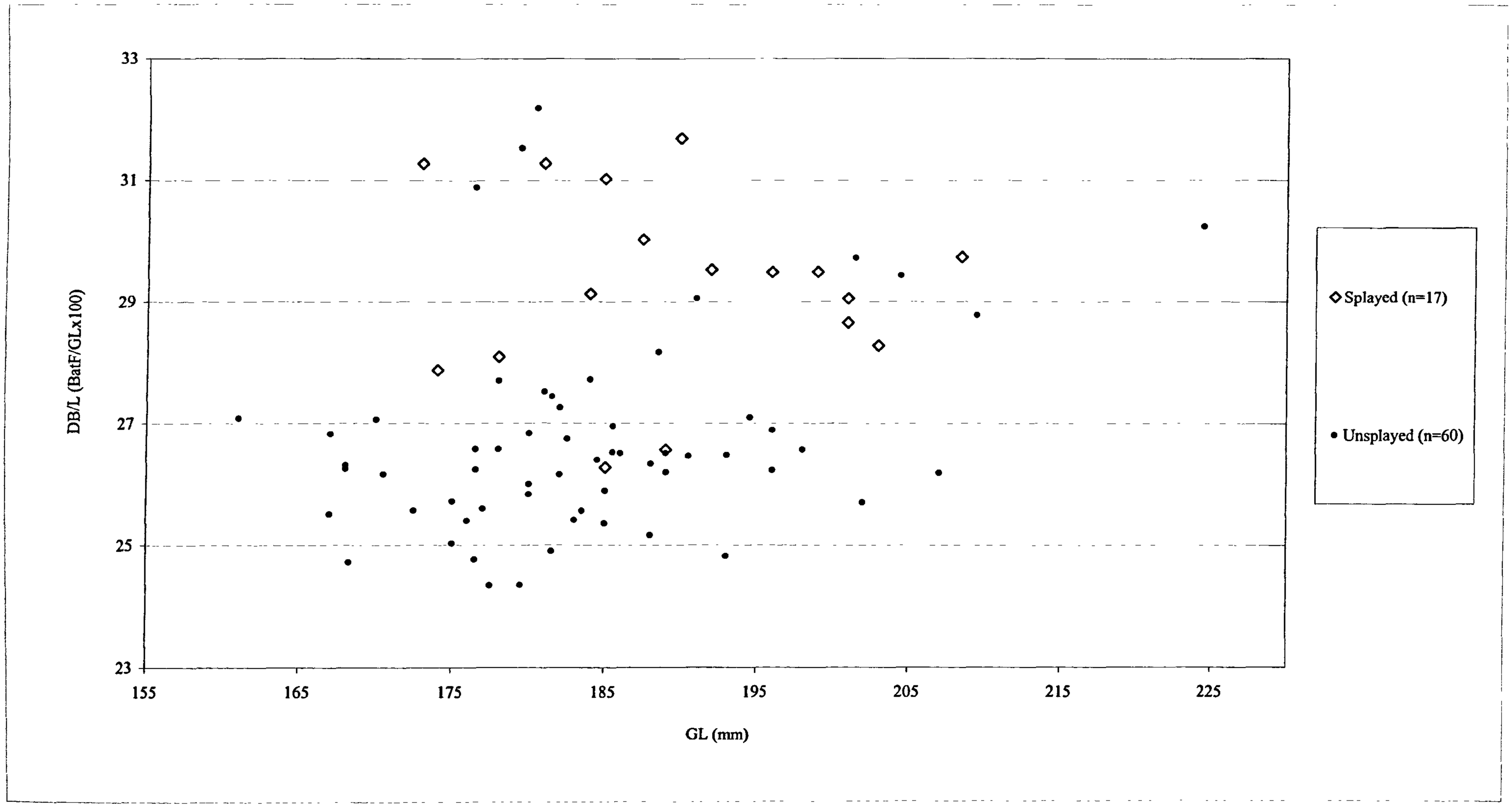
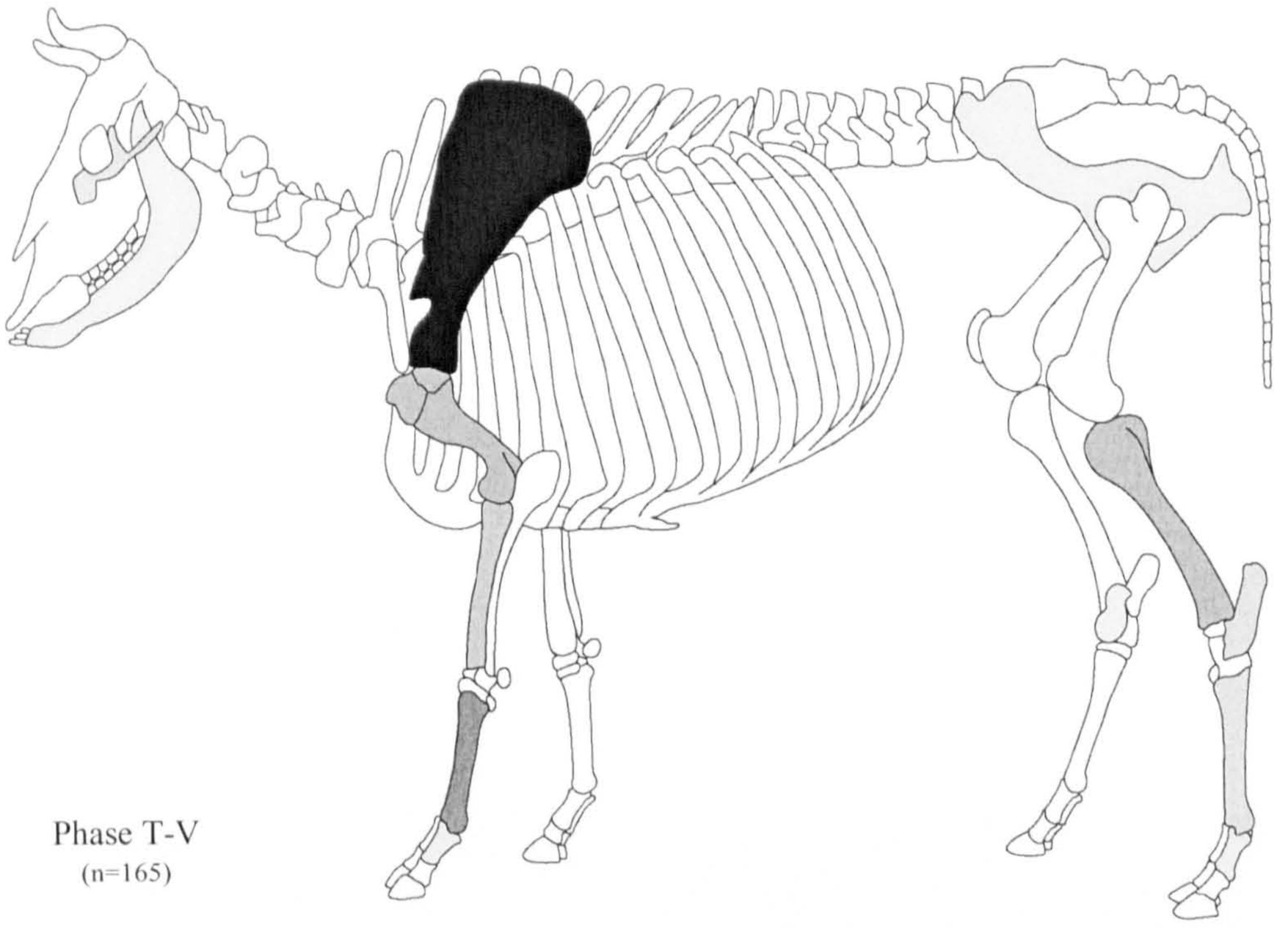
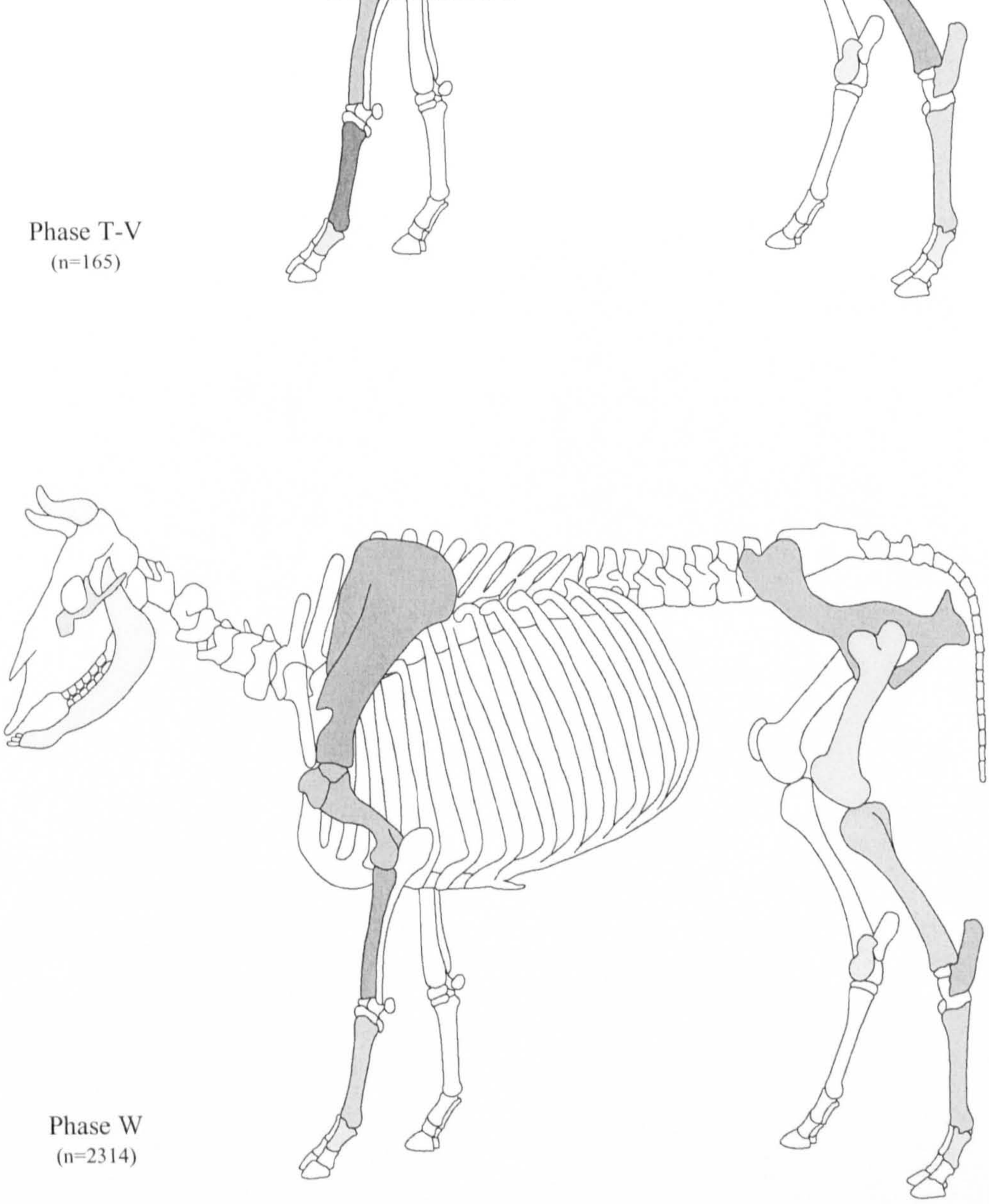


Figure 42. Cattle: Sexing: Metacarpal shape indices DB/L (distal breadth = BatF/GLx100) against GL, based on Howard (1963), annotated with condyle splaying



Phase T-V
(n=165)



Phase W
(n=2314)

Figure 43. Cattle: Butchery: Butchery frequiencies by anatomical element and chronological phase (expressed as a percentage of NISP)

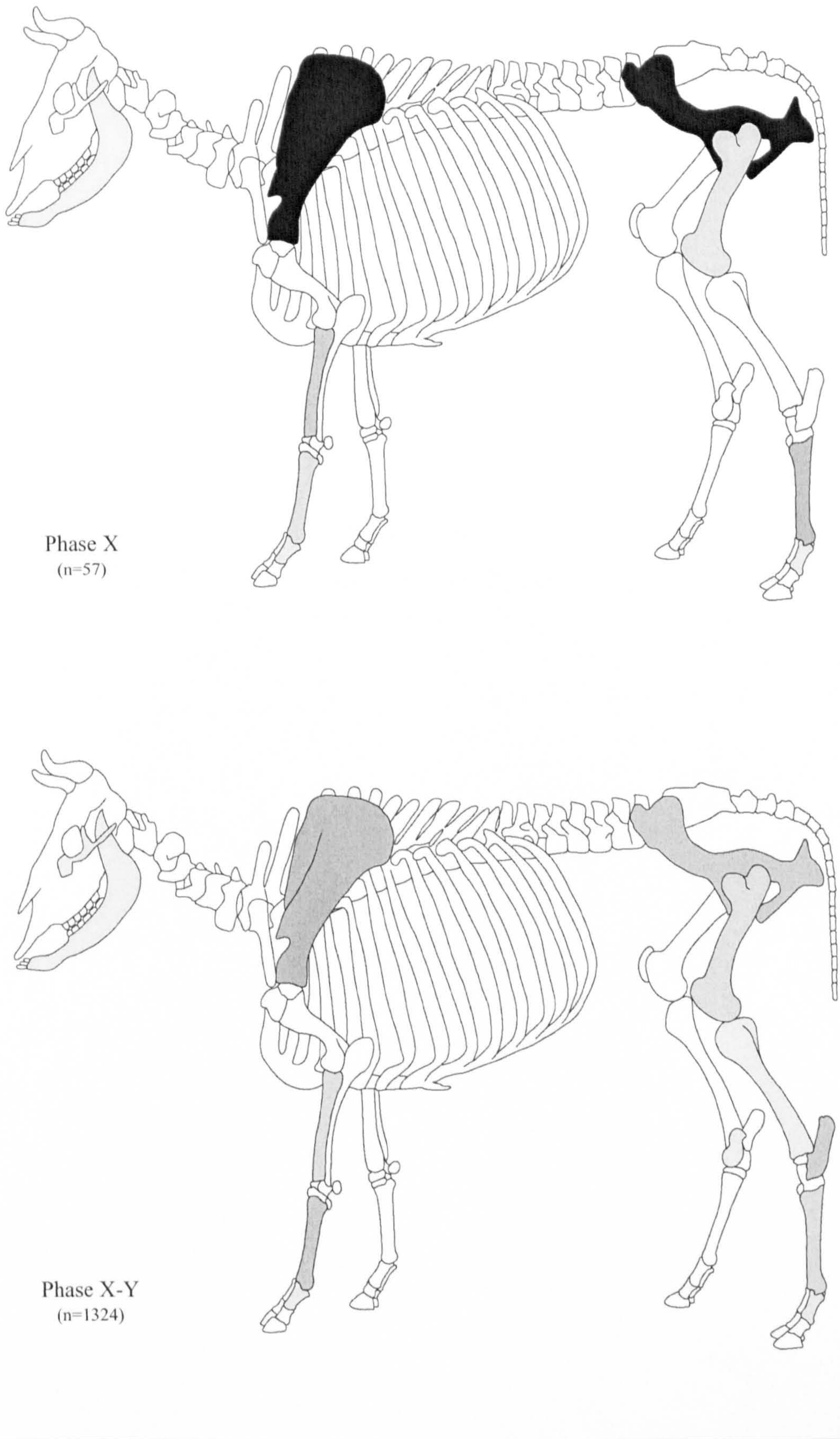
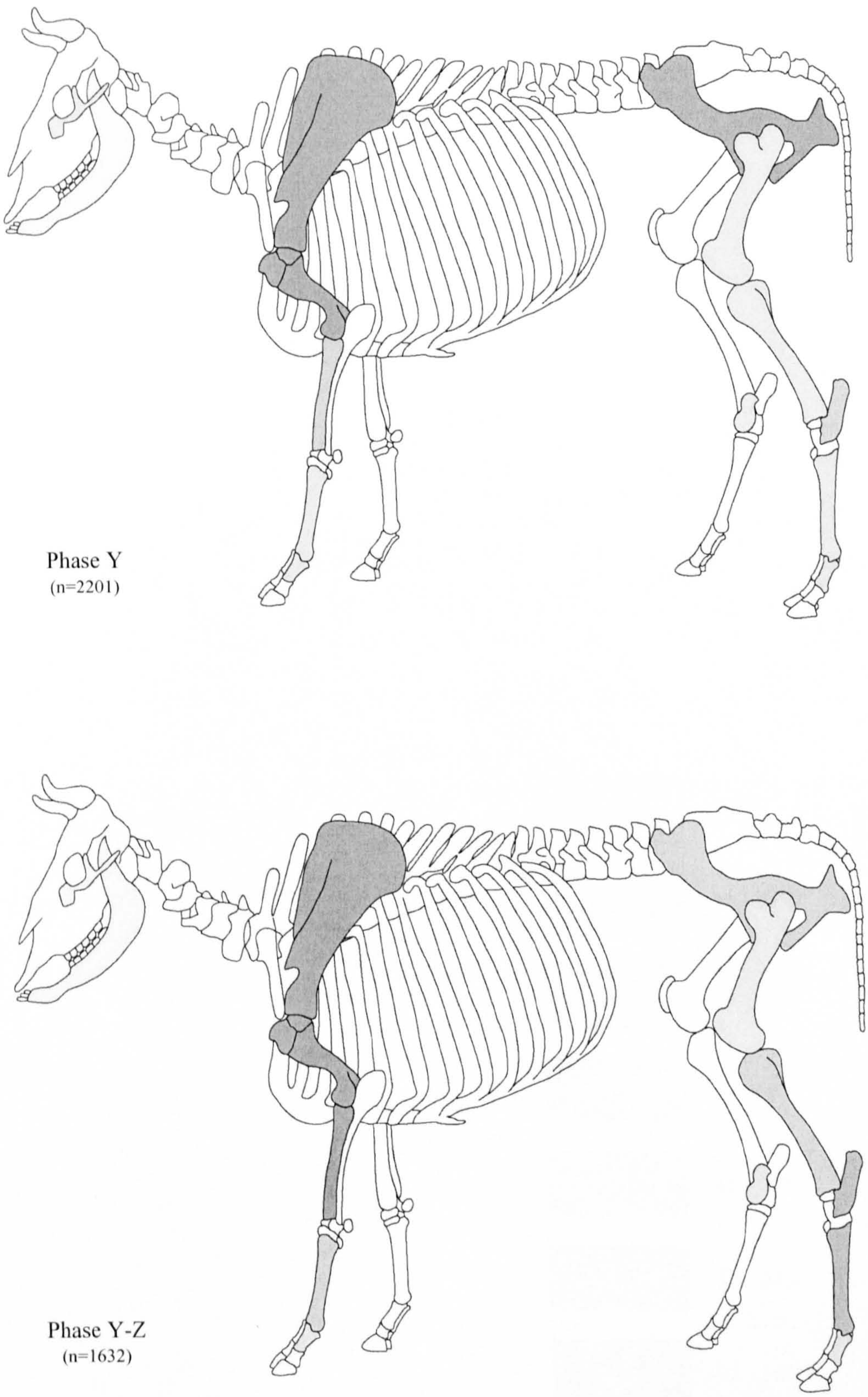


Figure 43 cont. Cattle: Butchery: Butchery frequiencies by anatomical element and chronological phase (expressed as a percentage of NISP)



Phase Y
(n=2201)

Phase Y-Z
(n=1632)

Figure 43 cont. Cattle: Butchery: Butchery frequiencies by anatomical element and chronological phase (expressed as a percentage of NISP)

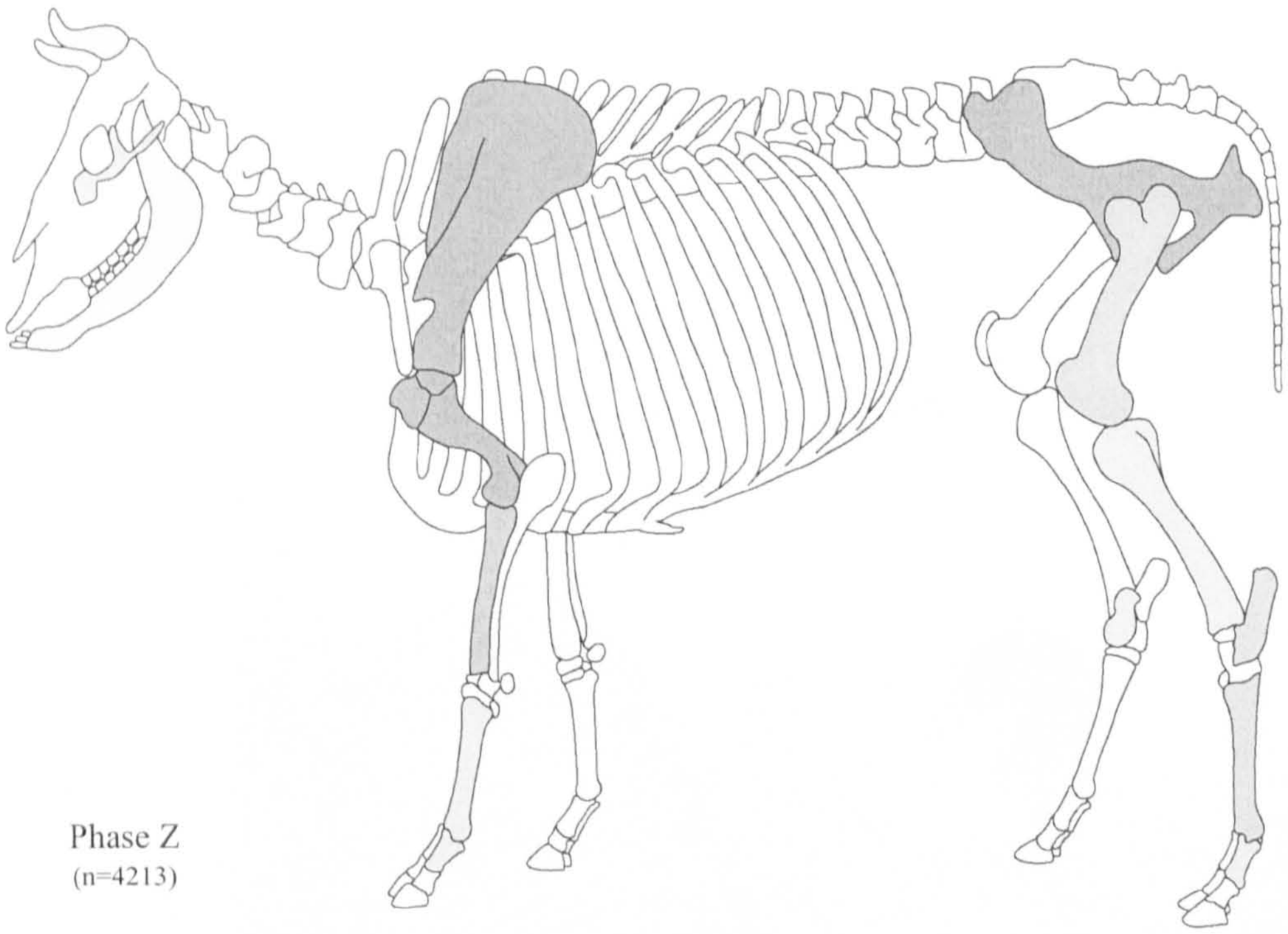


Figure 43 cont. Cattle: Butchery: Butchery frequiencies by anatomical element and chronological phase (expressed as a percentage of NISP)

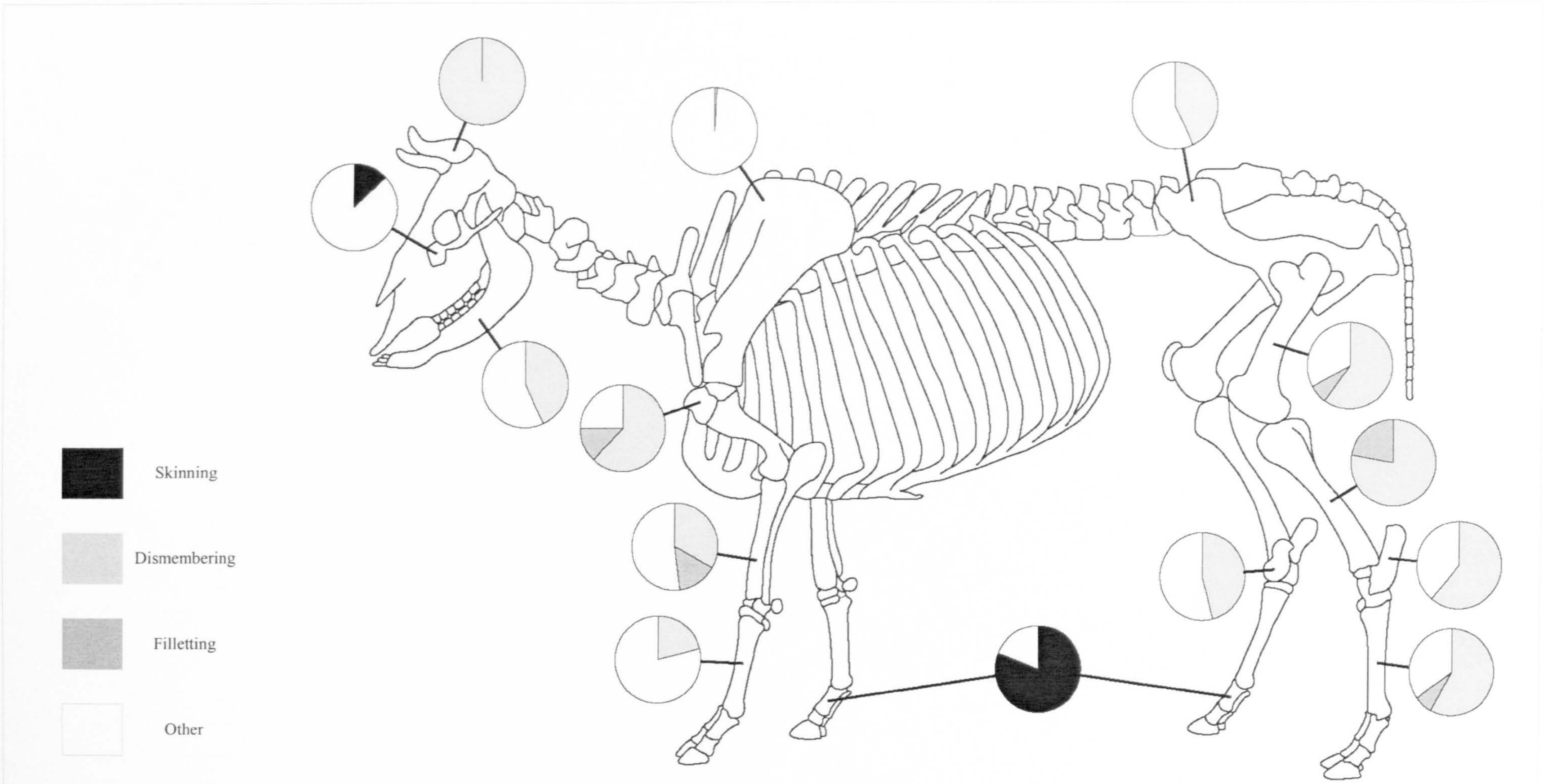


Figure 44. Cattle: Butchery: Phase W: Carcase reduction stages by anatomical element, based on Binford (1981)

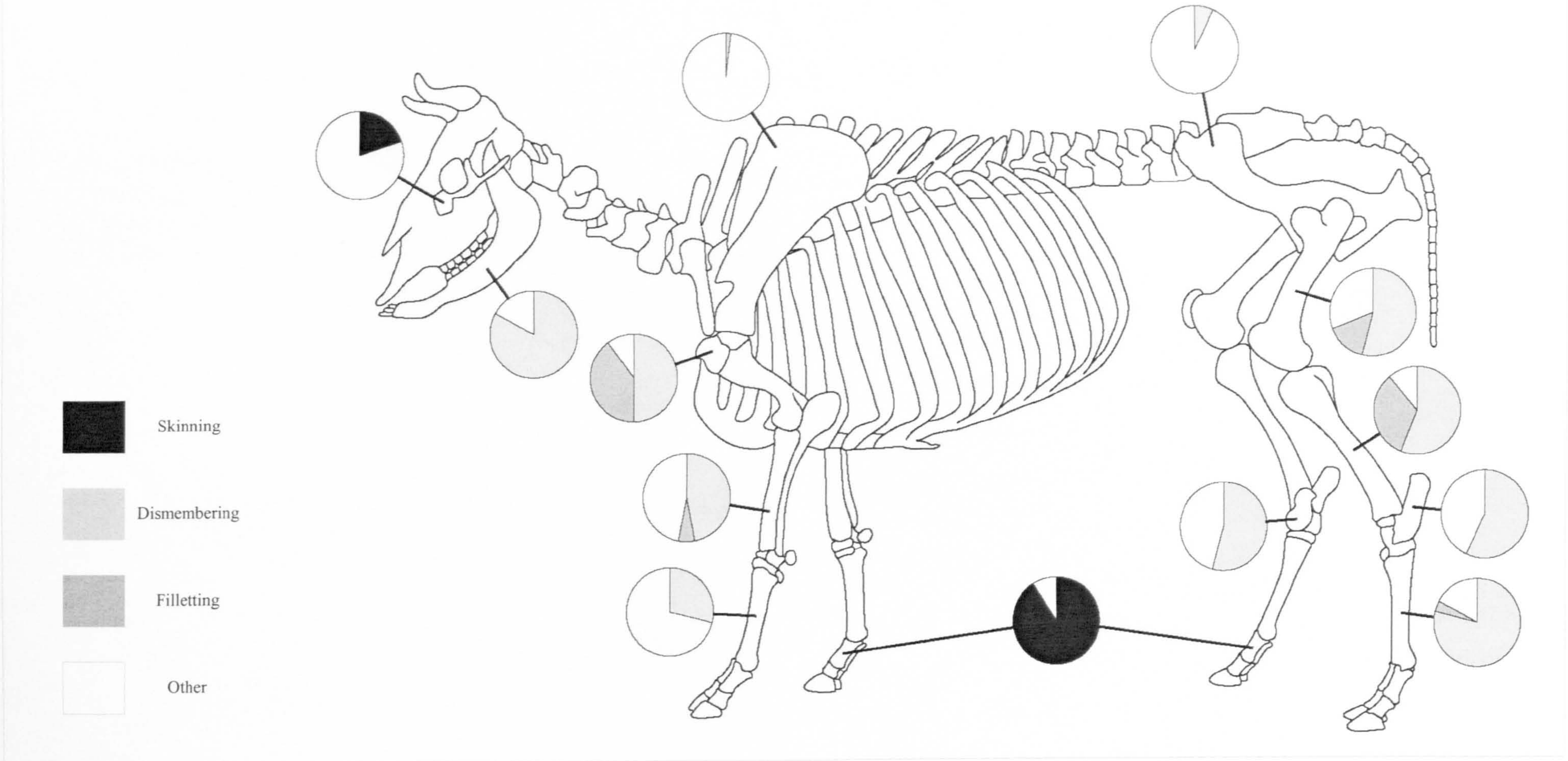


Figure 45. Cattle: Butchery: Phase X-Y: Carcase reduction stages by anatomical element, based on Binford (1981)

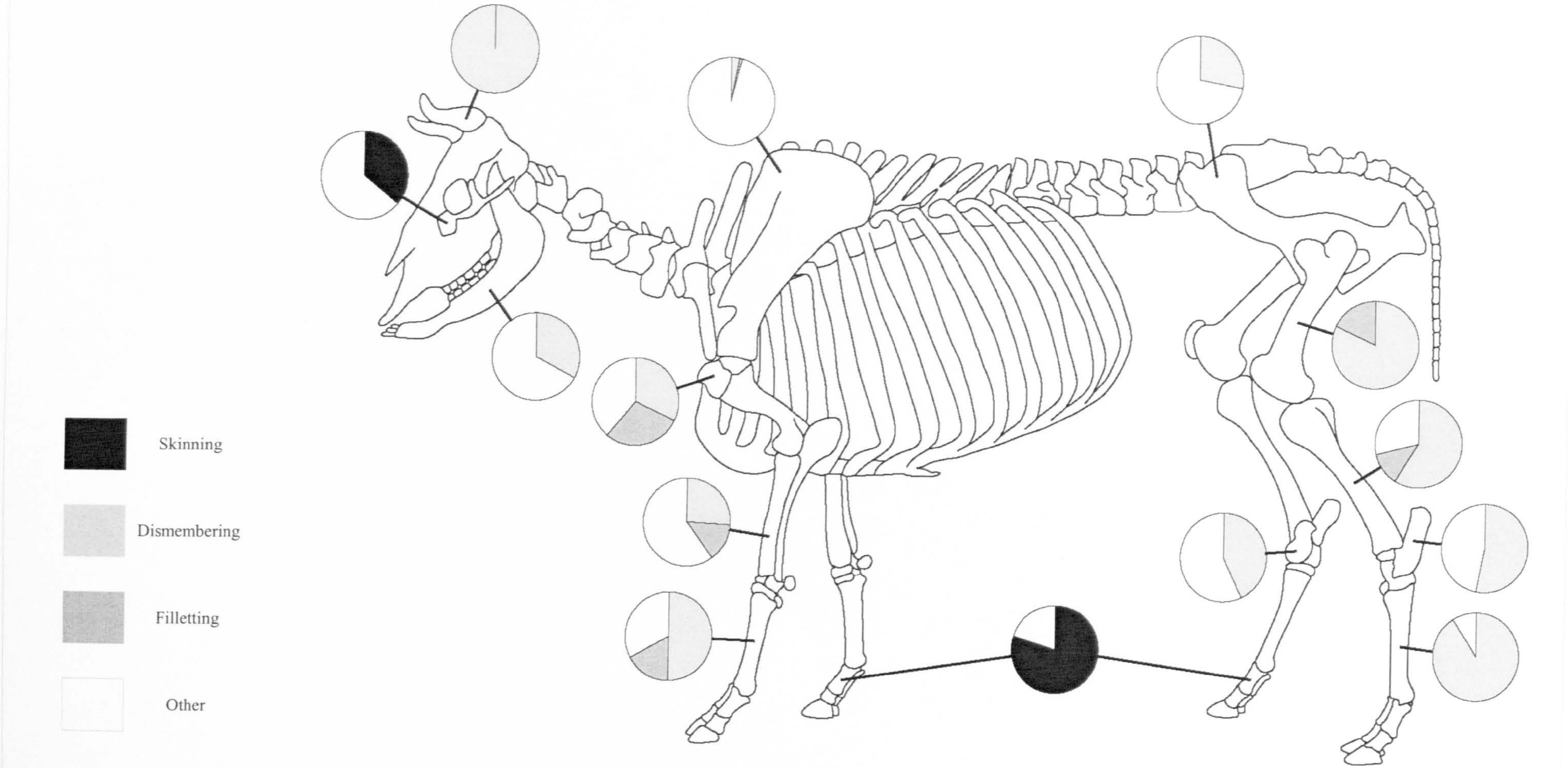


Figure 46. Cattle: Butchery: Phase Y: Carcase reduction stages by anatomical element, based on Binford (1981)

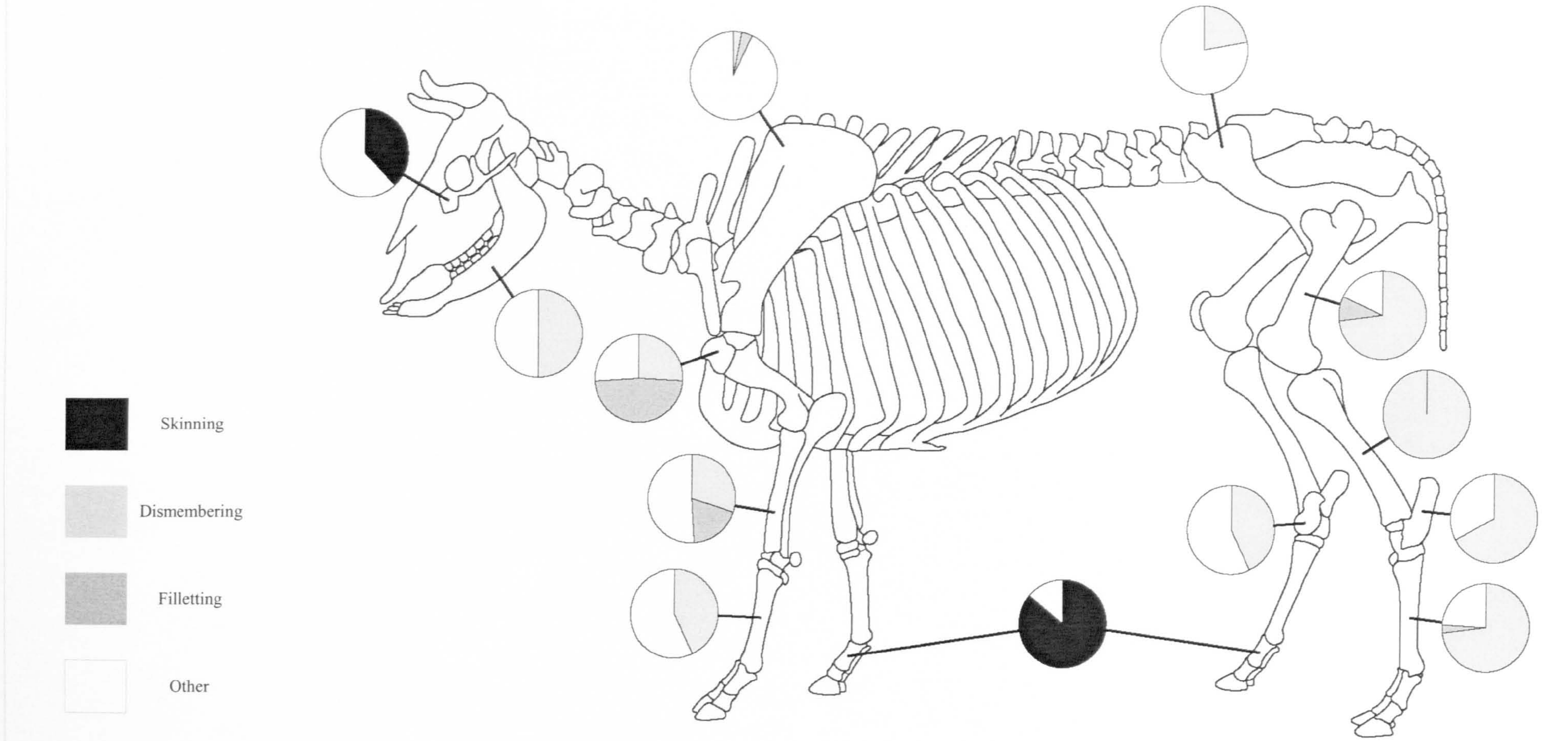


Figure 47. Cattle: Butchery: Phase Y-Z: Carcase reduction stages by anatomical element, based on Binford (1981)

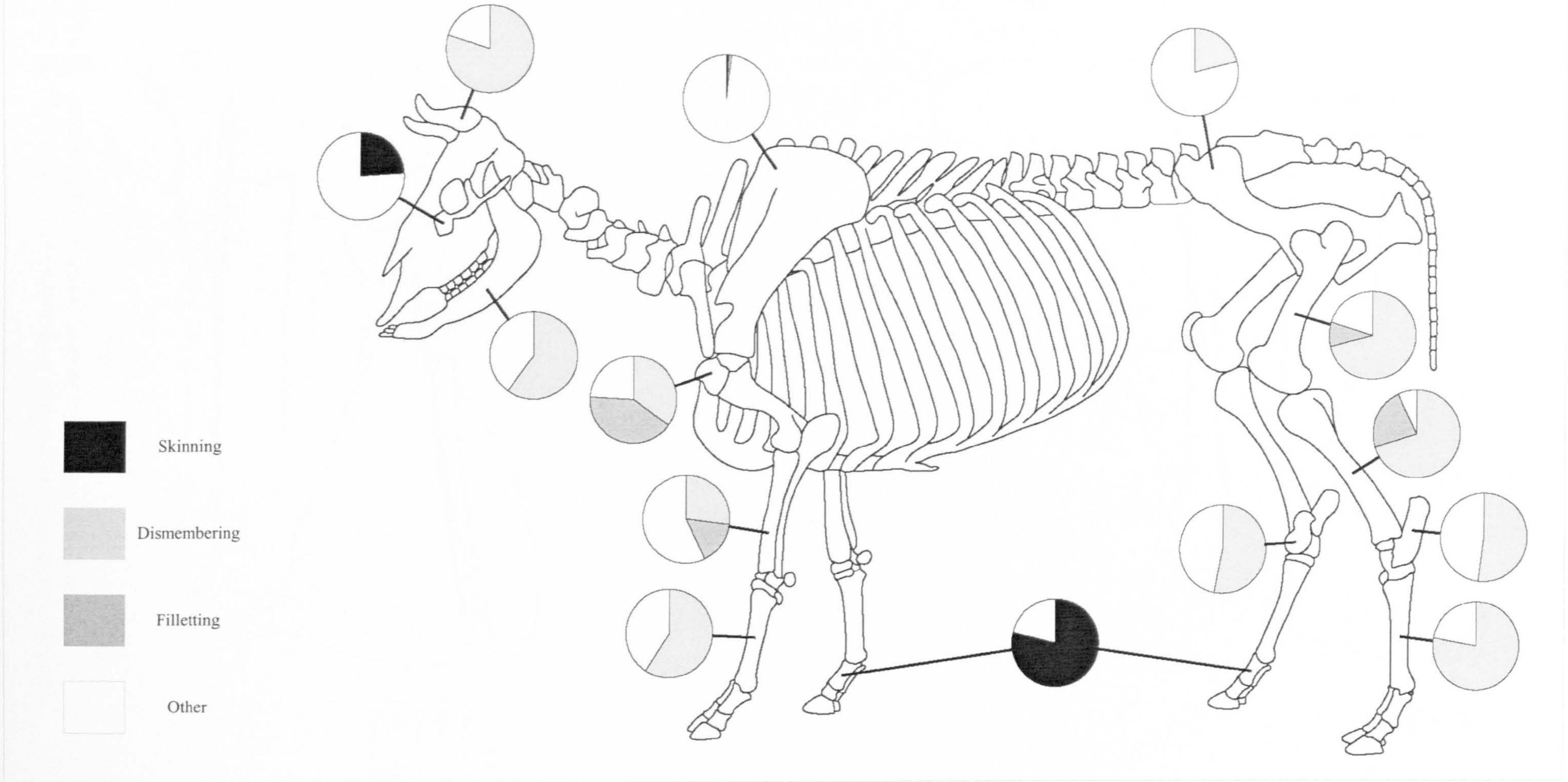
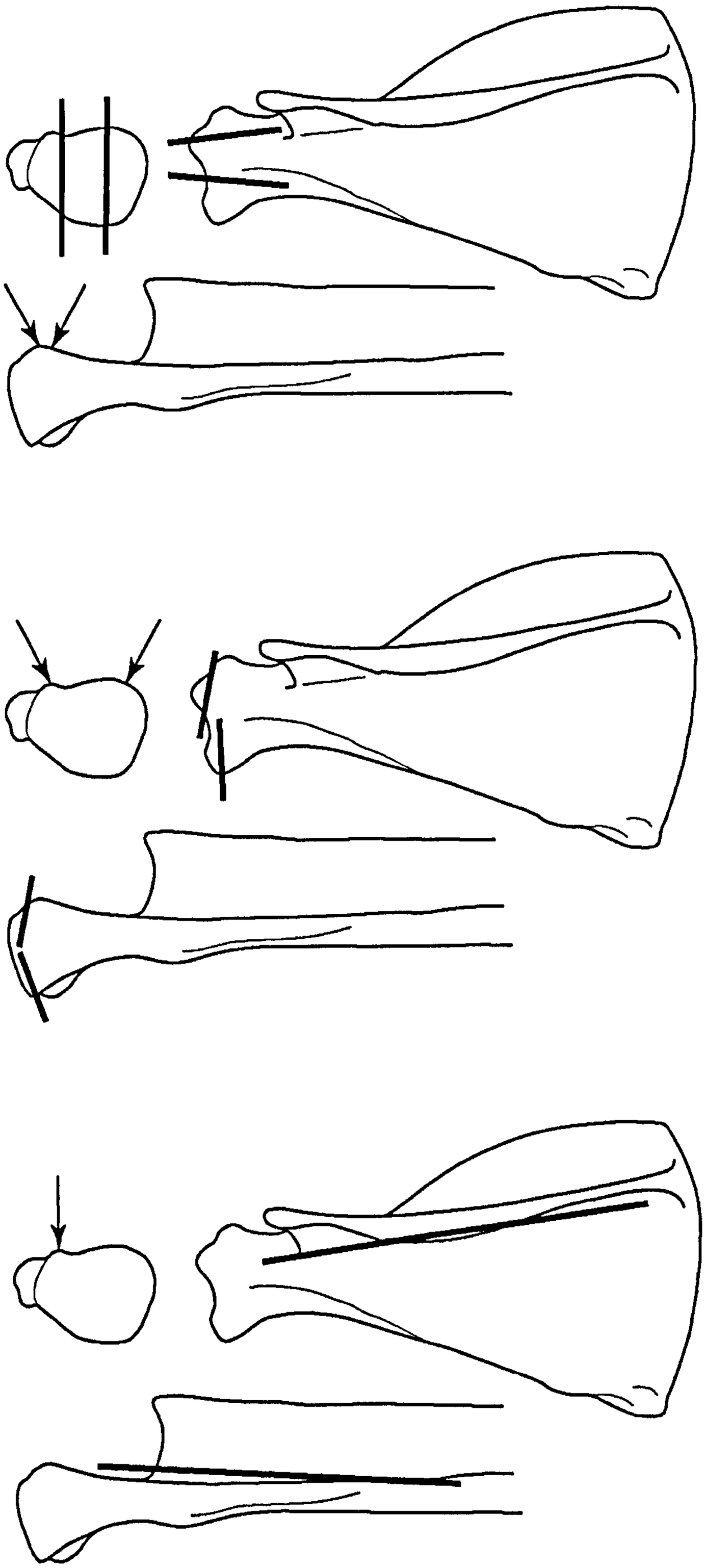


Figure 48. Cattle: Butchery: Phase Z: Carcase reduction stages by anatomical element, based on Binford (1981)

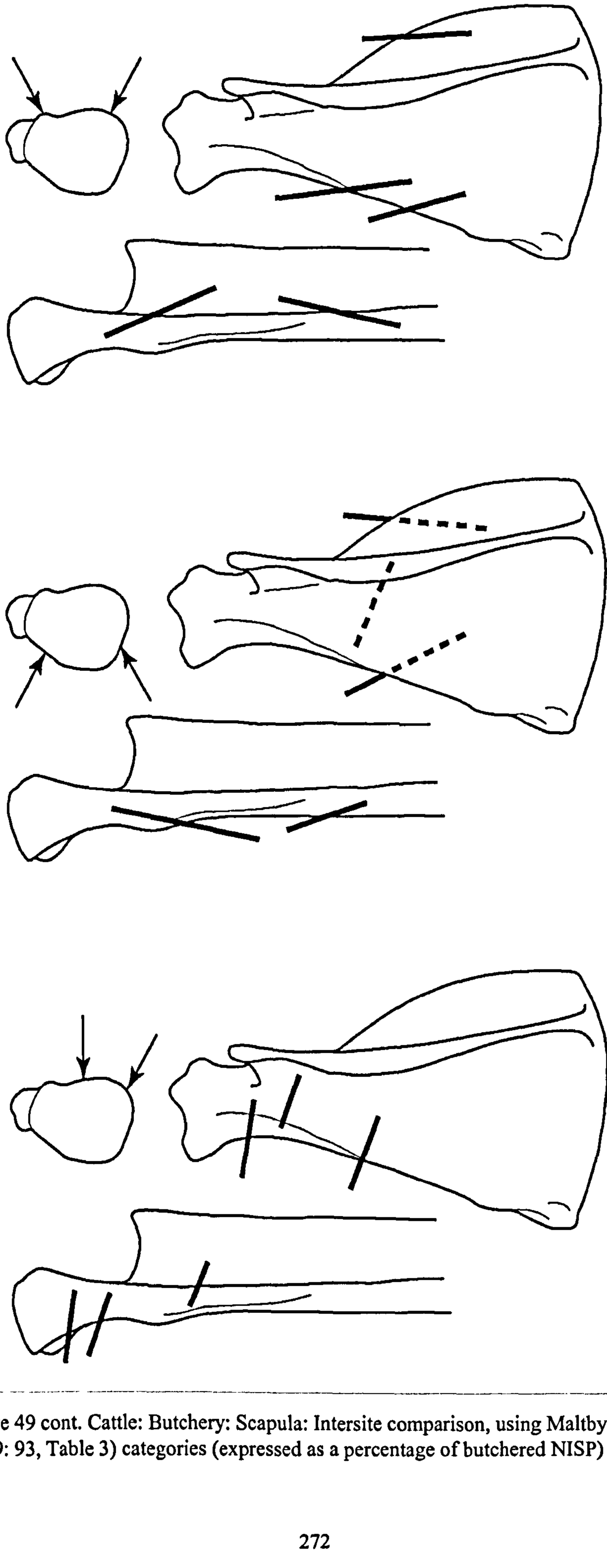


S1/2
Phase 59.3%
Phase X-Y 59.6%
Phase Y 56.9%
Phase Y-Z 62.5%
Phase Z 54.6%

S3
Phase W 1.2%
Phase X-Y 8.5%
Phase Y 4.6%
Phase Y-Z 10.0%
Phase Z 6.9%

S4
Phase W 71.6%
Phase X-Y 57.4%
Phase Y 53.8%
Phase Y-Z 42.5%
Phase Z 49.2%

Figure 49. Cattle: Butchery: Scapula: Intersite comparison, using Maltby's (1989: 93, Table 3) categories (expressed as a percentage of butchered NISP)

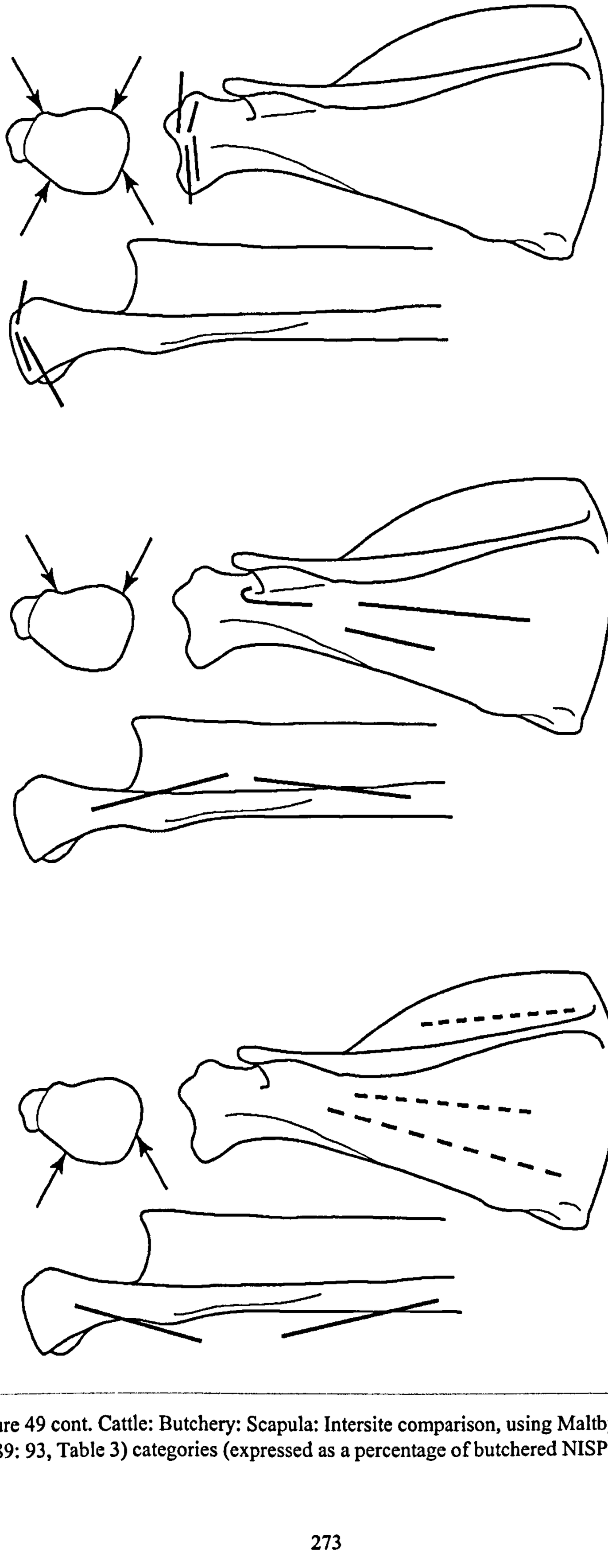


S5
Phase W 0.0%
Phase X-Y 0.0%
Phase Y 1.5%
Phase Y-Z 0.0%
Phase Z 0.8%

S6
Phase W 32.1%
Phase X-Y 17.0%
Phase Y 30.8%
Phase Y-Z 25.0%
Phase Z 23.8%

S7
Phase W 16.0%
Phase X-Y 23.4%
Phase Y 21.5%
Phase Y-Z 27.5%
Phase Z 33.1%

Figure 49 cont. Cattle: Butchery: Scapula: Intersite comparison, using Maltby's (1989: 93, Table 3) categories (expressed as a percentage of butchered NISP)

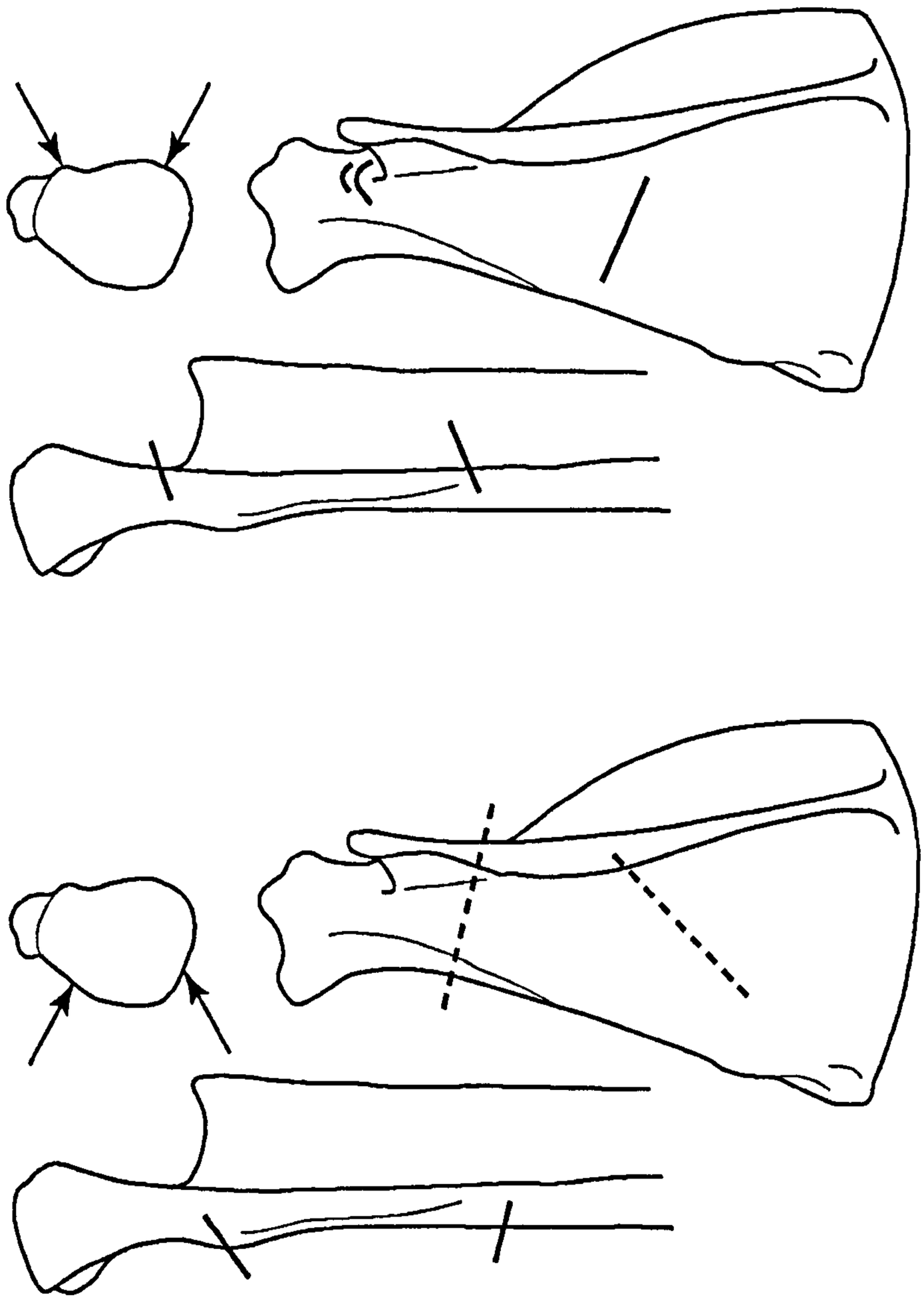


S8
Phase W 1.2%
Phase X-Y0.0%
Phase Y 0.0%
Phase Y-Z 0.0%
Phase Z 0.8%

S9
Phase W0.0%
Phase X-Y 0.0%
Phase Y 4.6%
Phase Y-Z 0.0%
Phase Z 1.5%

S10
Phase W 4.9%
Phase X-Y 4.3%
Phase Y 1.5%
Phase Y-Z 10.0%
Phase Z 5.4%

Figure 49 cont. Cattle: Butchery: Scapula: Intersite comparison, using Maltby's (1989: 93, Table 3) categories (expressed as a percentage of butchered NISP)



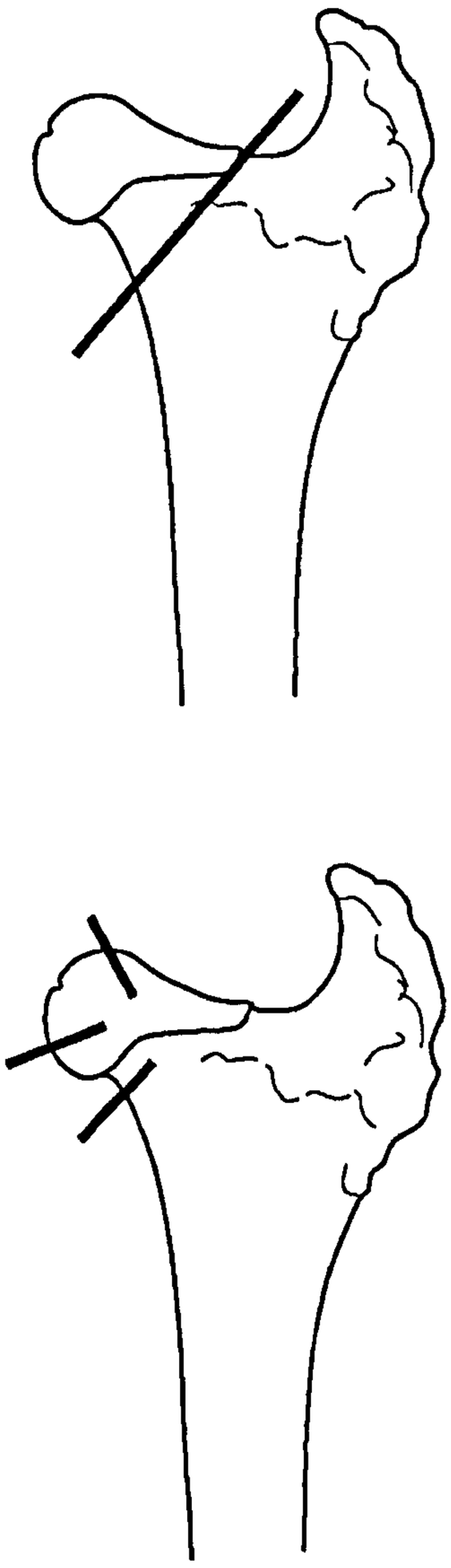
S11
Phase W 0.0%
Phase X-Y 4.3%
Phase Y 4.6%
Phase Y-Z 5.0%
Phase Z 10.8%

S12
Phase W 2.5%
Phase X-Y 12.8%
Phase Y 1.5%
Phase Y-Z 0.0%
Phase Z 6.9%

Figures are based on the following number of observations:

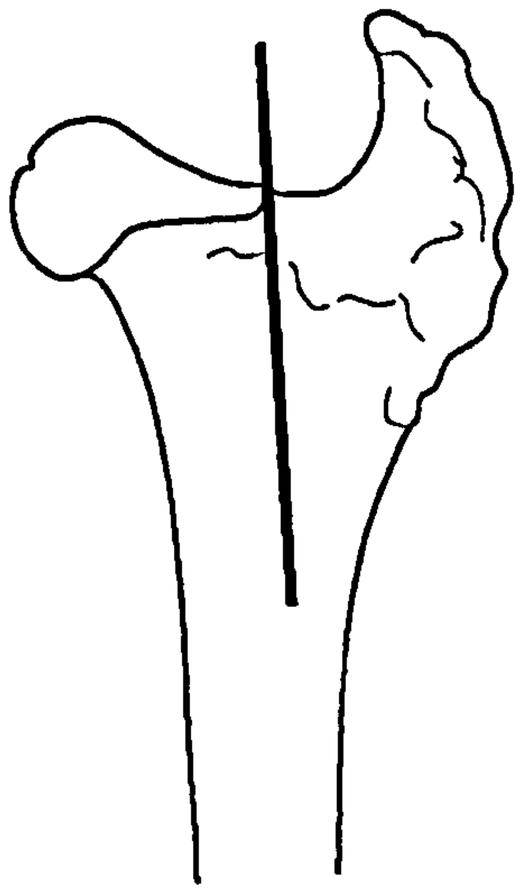
Phase W = 21
Phase X-Y = 22
Phase Y = 34
Phase Y-Z
Phase Z = 55

Figure 49 cont. Cattle: Butchery: Scapula: Intersite comparison, using Maltby's (1989: 93, Table 3) categories (expressed as a percentage of butchered NISP)



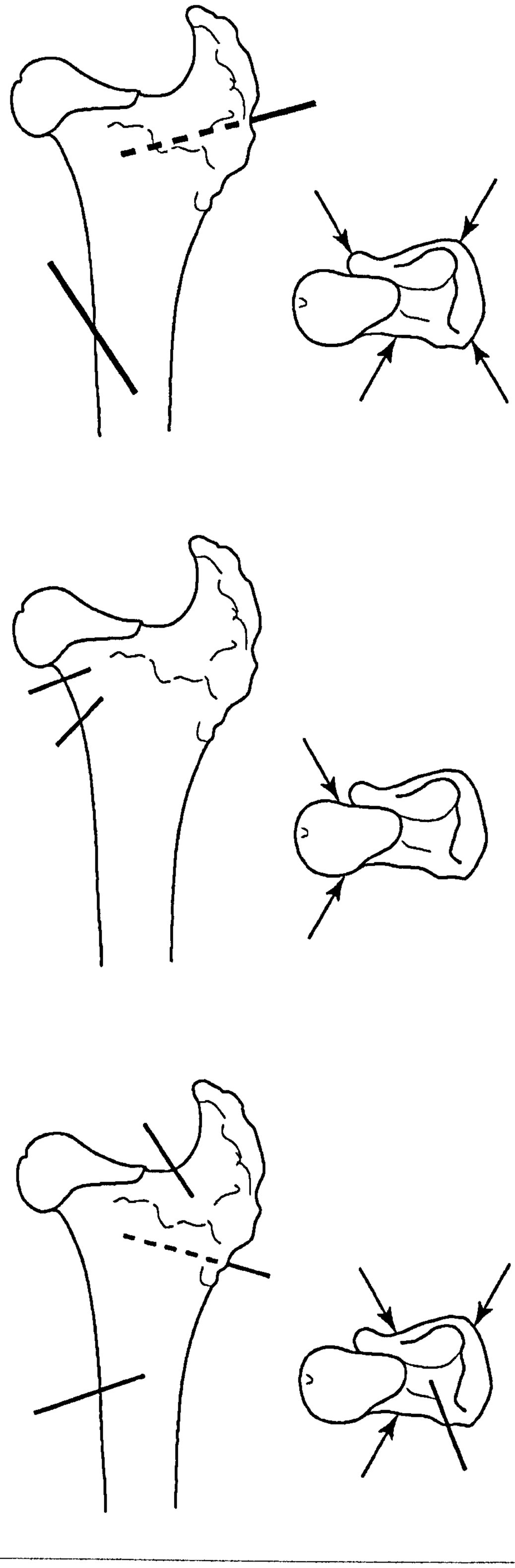
F1/2
Phase W 52.4%
Phase X-Y 63.6%
Phase Y 38.2%
Phase Z 49.1%

F3
Phase W 71.4%
Phase X-Y 86.4%
Phase Y 70.6%
Phase Z 74.5%



F4
Phase W 9.5%
Phase X-Y 0.0%
Phase Y 8.8%
Phase Z 1.8%

Figure 50. Cattle: Butchery: Proximal femur: Inter-site comparison, using Maltby's (1989: 97, Table 7) categories (expressed as a percentage of butchered NISP)

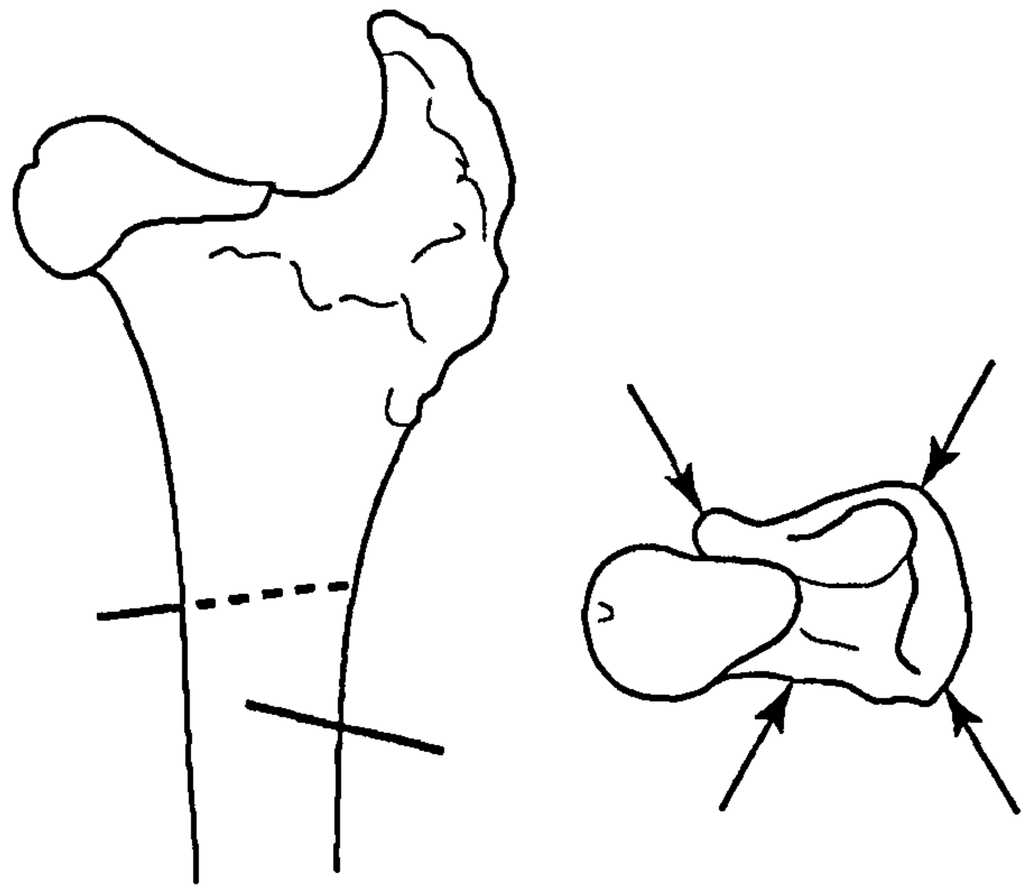


F9
Phase W 14.3%
Phase X-Y 18.2%
Phase Y 17.6%
Phase Z 9.1%

F10
Phase W 14.3%
Phase X-Y 9.1%
Phase Y 0.0%
Phase Z 5.5%

F11
Phase W 4.8%
Phase X-Y 0.0%
Phase Y 20.6%
Phase Z 21.8%

Figure 50. Cattle: Butchery: Proximal femur: Inter-site comparison, using Maltby's (1989: 97, Table 7) categories (expressed as a percentage of butchered NISP)

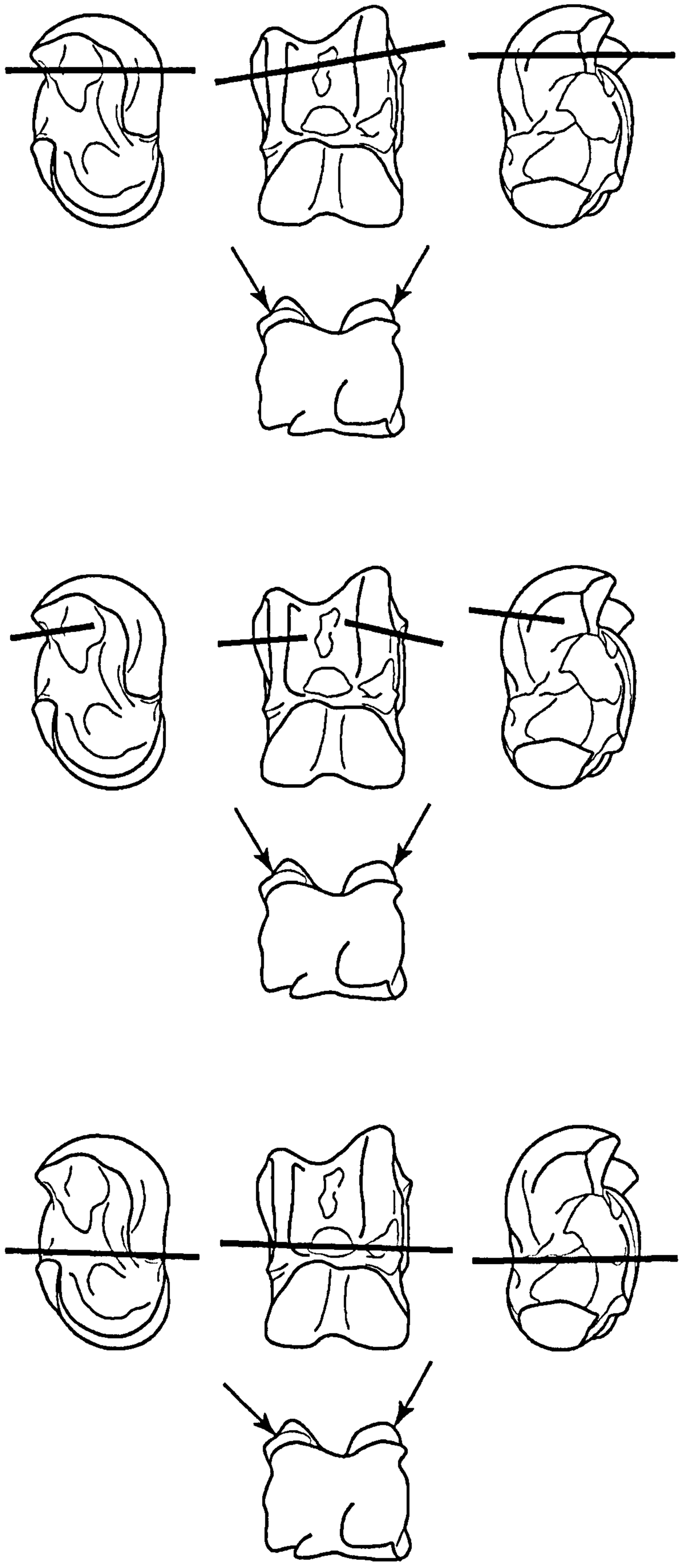


F12
Phase W 0.0%
Phase X-Y 0.0%
Phase Y 0.0%
Phase Z 9.1%

Figures are based on the following number of observations:

Phase W = 21
Phase X-Y = 22
Phase Y = 34
Phase Z = 55

Figure 50. Cattle: Butchery: Proximal femur: Inter-site comparison, using Maltby's (1989: 97, Table 7) categories (expressed as a percentage of butchered NISP)

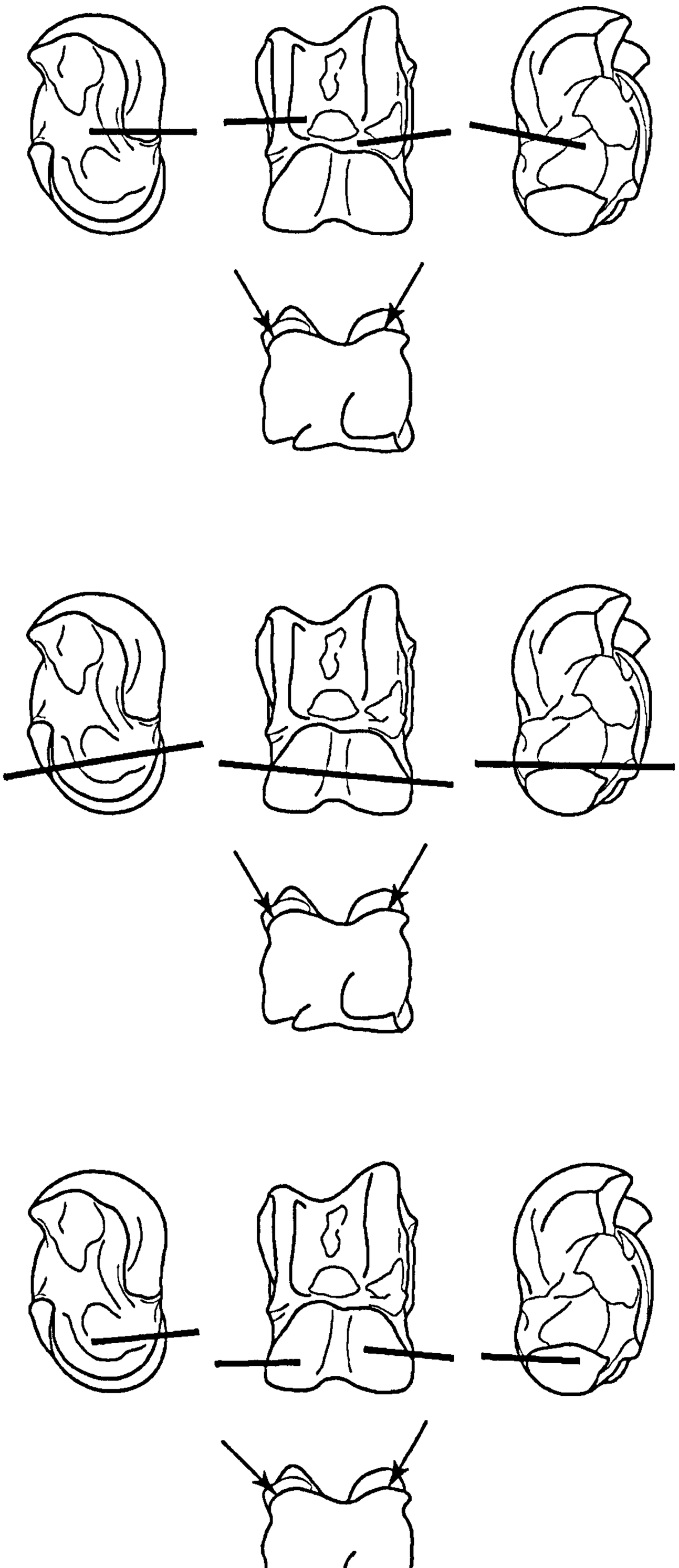


A1
Phase W 39.1%
Phase X-Y 33.3%
Phase Y 15.8%
Phase Y-Z 28.6%
Phase Z 14.3%

A2
Phase W 26.1%
Phase X-Y 8.3%
Phase Y 31.6%
Phase Y-Z 28.6%
Phase Z 14.3%

A3
Phase W 4.3%
Phase X-Y 8.3%
Phase Y 10.5%
Phase Y-Z 14.3%
Phase Z 4.8%

Figure 51. Cattle: Butchery: Astragalus: Inter-site comparison, using Maltby's (1989: 99, Table 9) categories (expressed as a percentage of butchered NISP)

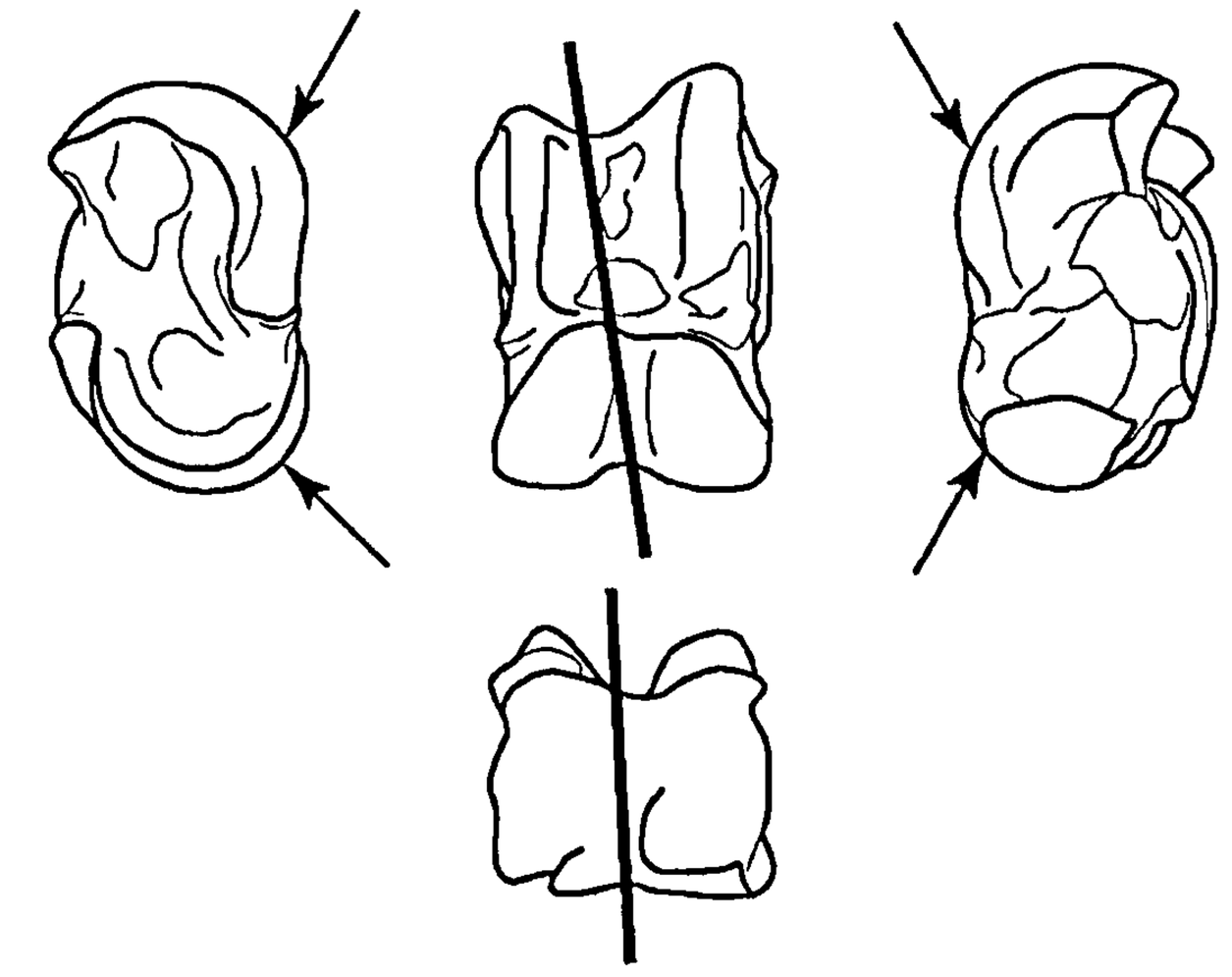


A4
Phase W 47.8%
Phase X-Y 50.0%
Phase Y 31.6%
Phase Y-Z 35.7%
Phase Z 33.3%

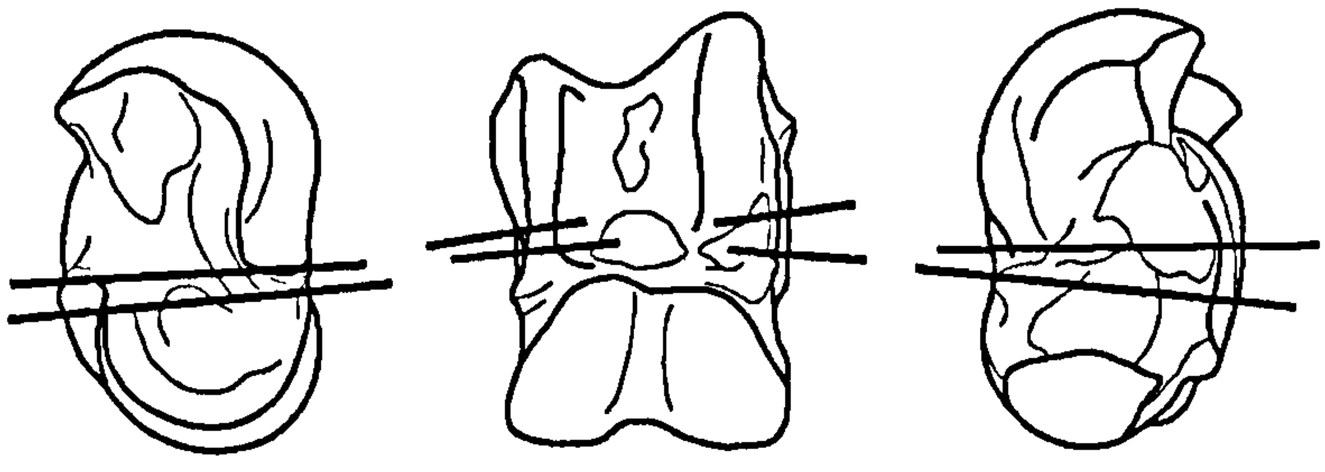
A5
Phase W 8.7%
Phase X-Y 8.3%
Phase Y 0.0%
Phase Y-Z 7.1%
Phase Z 4.8%

A6
Phase W 0.0%
Phase X-Y 8.3%
Phase Y 0.0%
Phase Y-Z 0.0%
Phase Z 2.4%

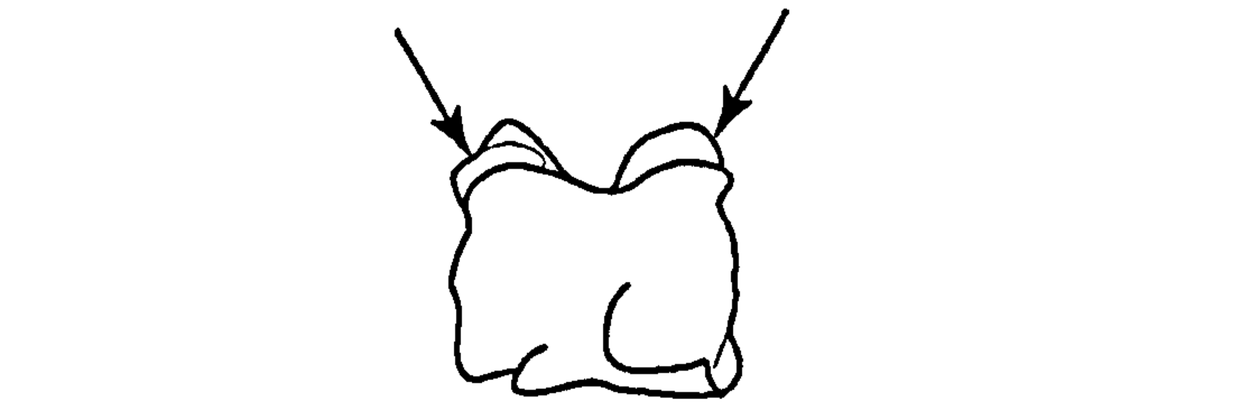
Figure 51 cont. Cattle: Butchery: Astragalus: Inter-site comparison, using Maltby's (1989: 99, Table 9) categories (expressed as a percentage of butchered NISP)

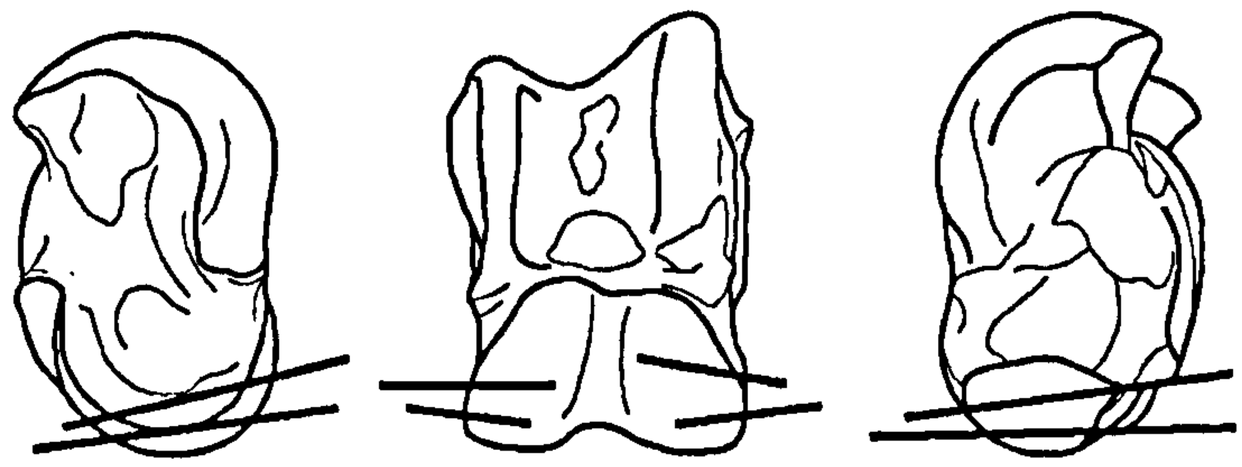


A7/8
Phase W 17.4%
Phase X-Y 0.0%
Phase Y 0.0%
Phase Y-Z 7.1%
Phase Z 0.0%



A9
Phase W 8.7%
Phase X-Y 25.0%
Phase Y 21.1%
Phase Y-Z 14.3%
Phase Z 33.3%





A10
Phase W 13.0%
Phase X-Y 33.3%
Phase Y 31.6%
Phase Y-Z 7.1%
Phase Z 33.3%

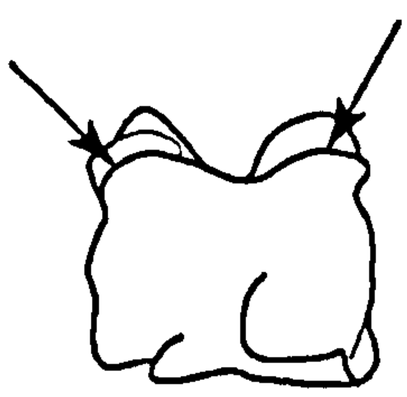
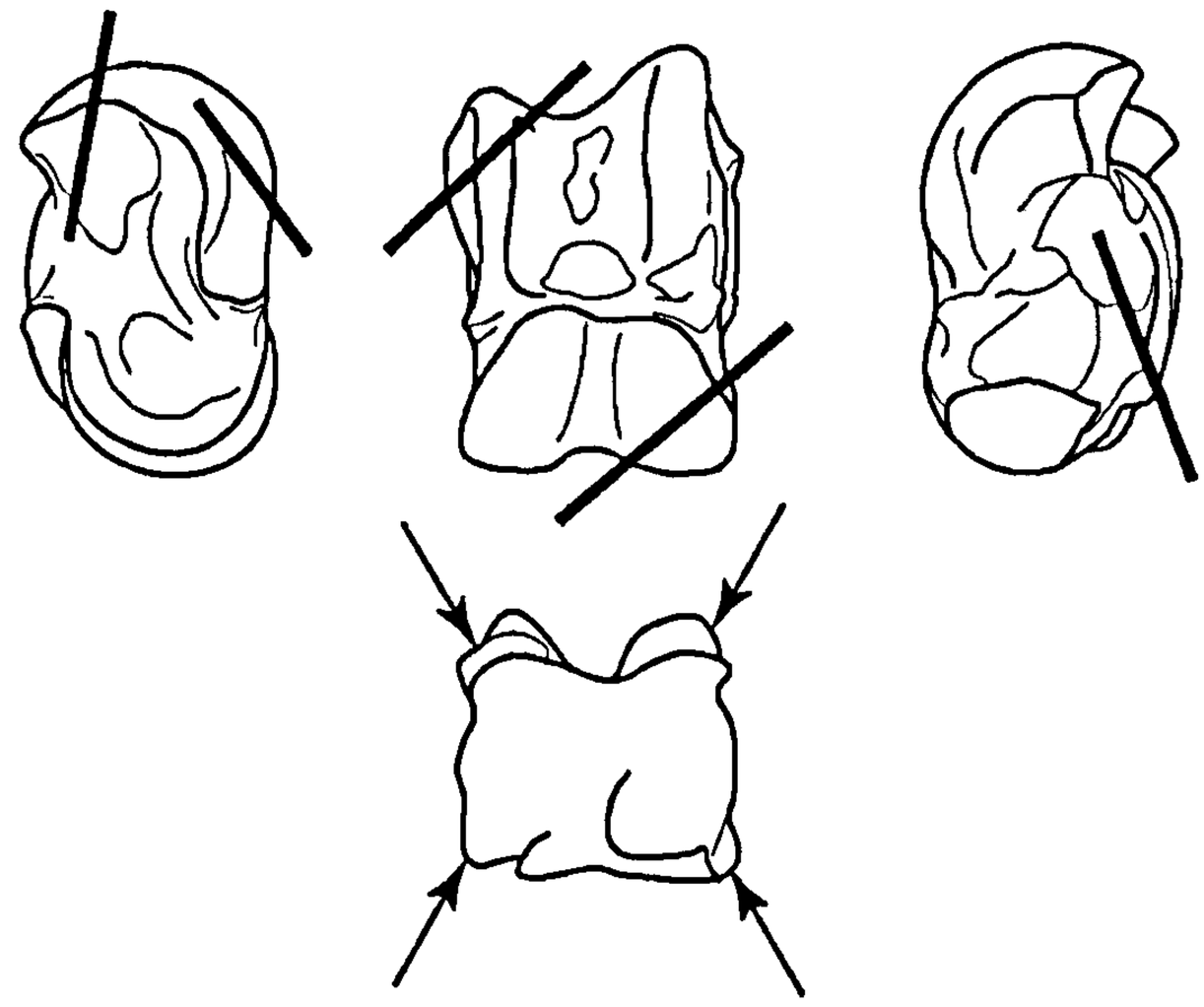


Figure 51 cont. Cattle: Butchery: Astragalus: Inter-site comparison, using Maltby's (1989: 99, Table 9) categories (expressed as a percentage of butchered NISP)

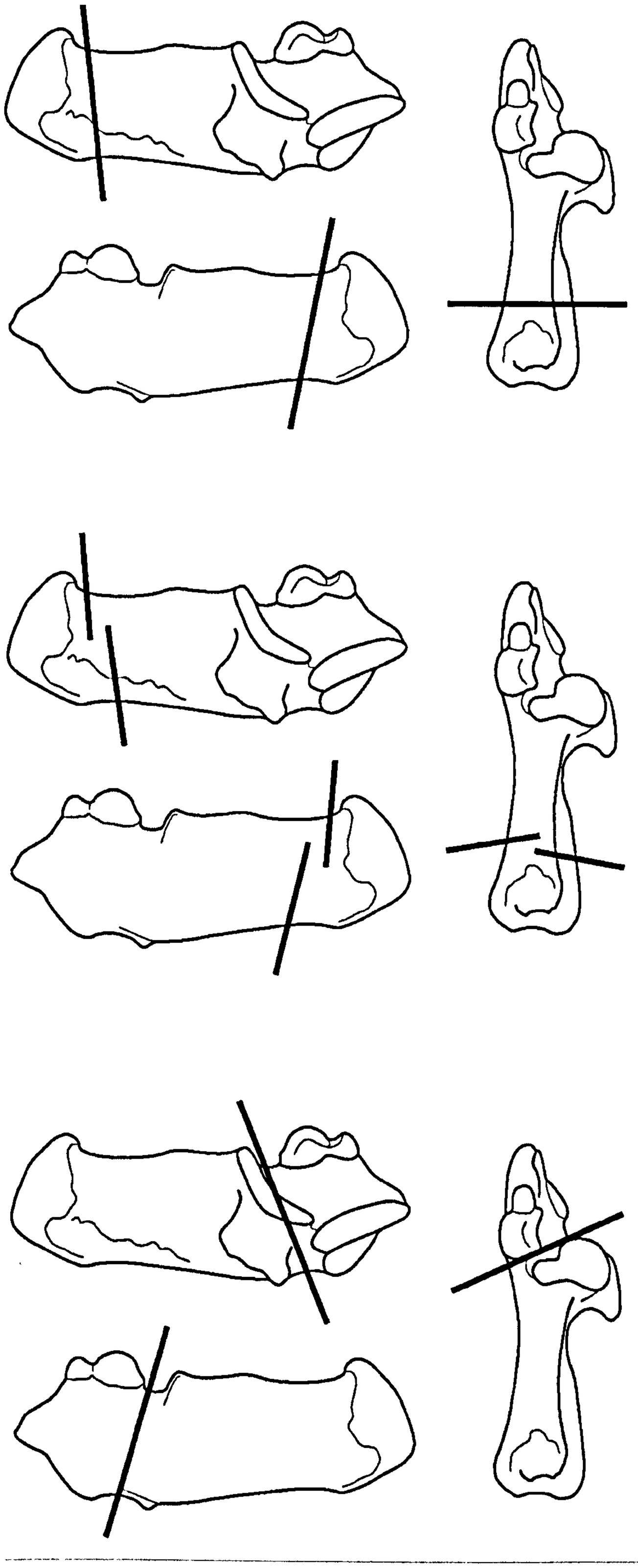


A12
Phase W 8.7%
Phase X-Y 8.3%
Phase Y 15.8%
Phase Y-Z 28.6%
Phase Z 9.5%

Figures are based on the following number of observations:

Phase W = 23
Phase X-Y = 12
Phase Y = 19
Phase Y-Z = 14
Phase Z = 42

Figure 51 cont. Cattle: Butchery: Astragalus: Inter-site comparison, using Maltby's (1989: 99, Table 9) categories (expressed as a percentage of butchered NISP)

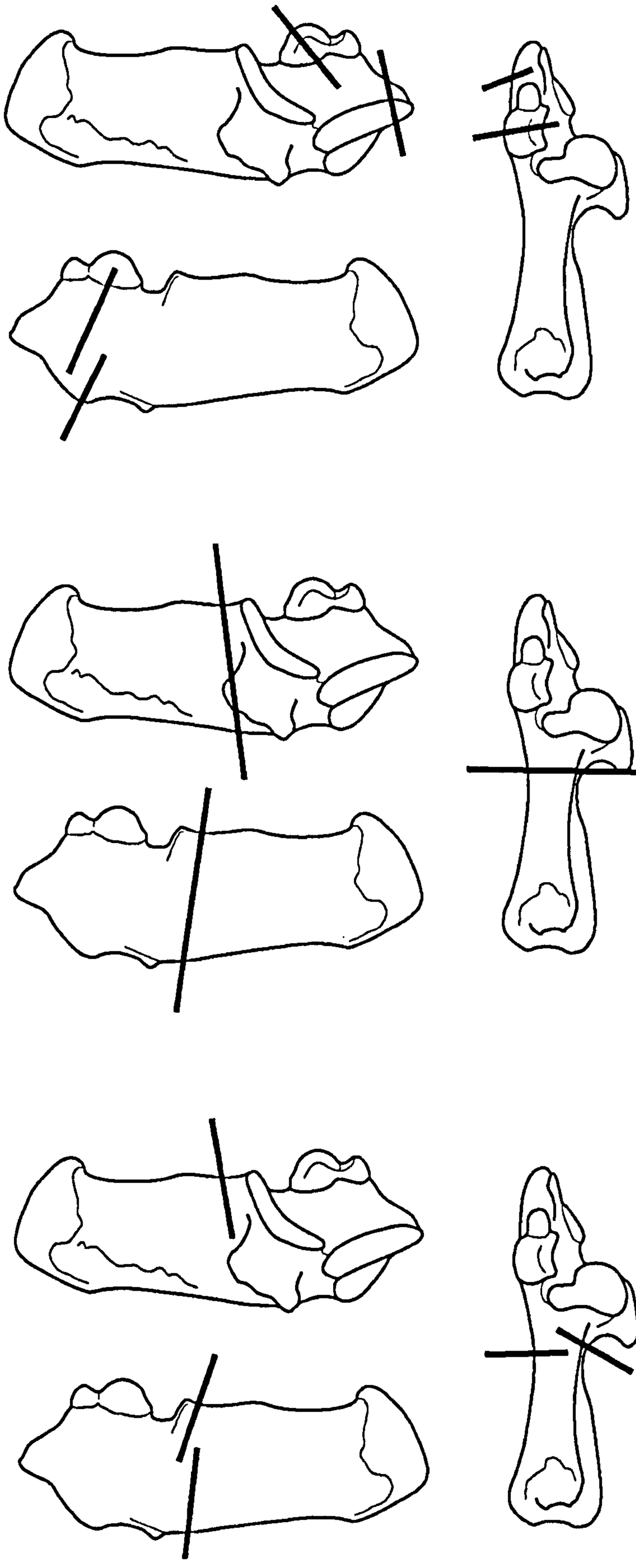


C1
Phase W 37.5%
Phase X-Y 40.6%
Phase Y 51.2%
Phase Y-Z 33.3%
Phase Z 35.0%

C2
Phase W 6.3%
Phase X-Y 6.3%
Phase Y 20.9%
Phase Y-Z 13.3%
Phase Z 12.5%

C3
Phase W 45.8%
Phase X-Y 34.4%
Phase Y 25.6%
Phase Y-Z 23.3%
Phase Z 35.0%

Figure 52. Cattle: Butchery: Calcaneum: Inter-site comparison, using Maltby's (1989: 100, Table 10) categories (expressed as a percentage of butchered NISP)

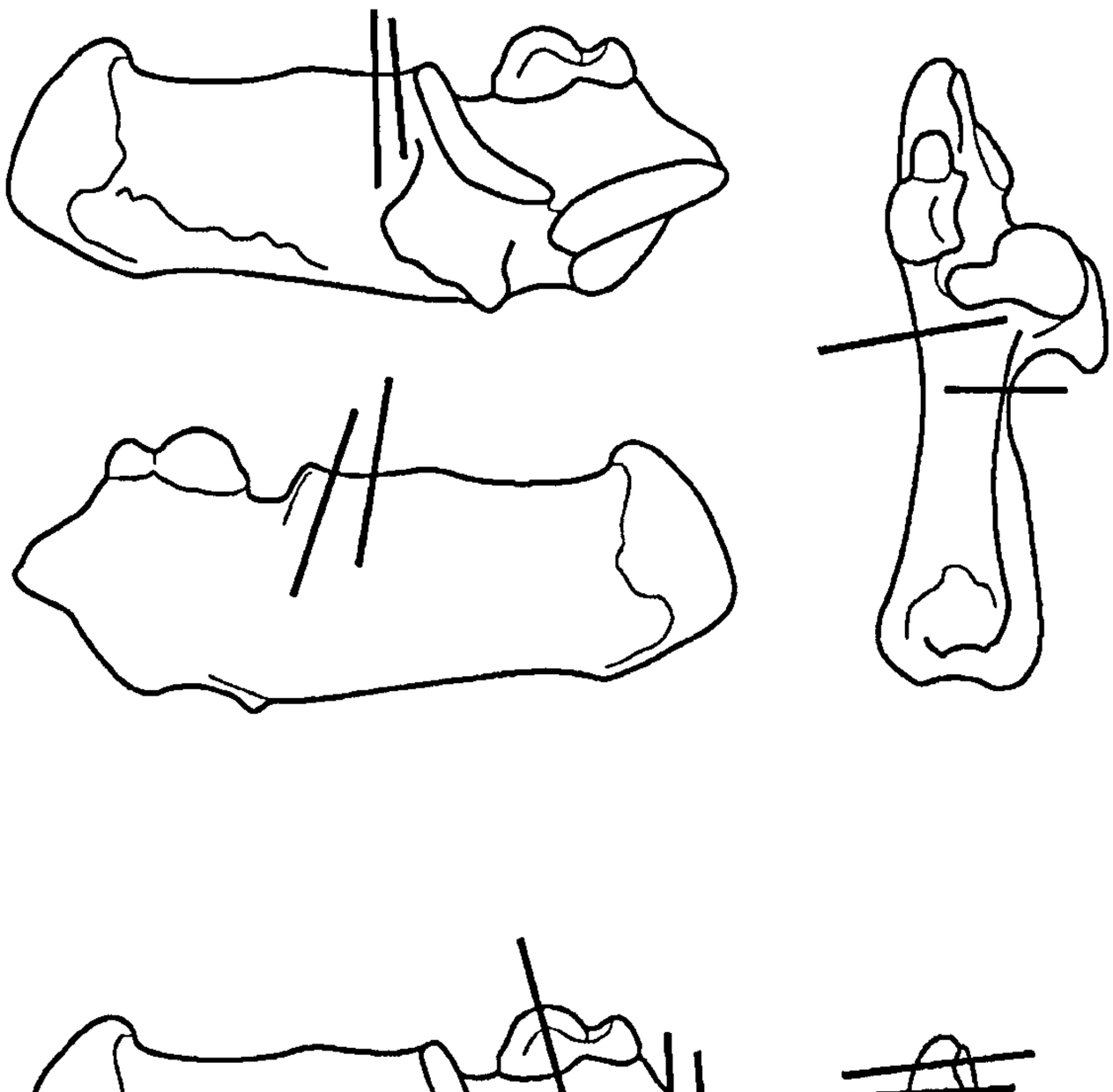


C4
Phase W 12.5%
Phase X-Y 3.1%
Phase Y 4.7%
Phase Y-Z 3.3%
Phase Z 3.8%

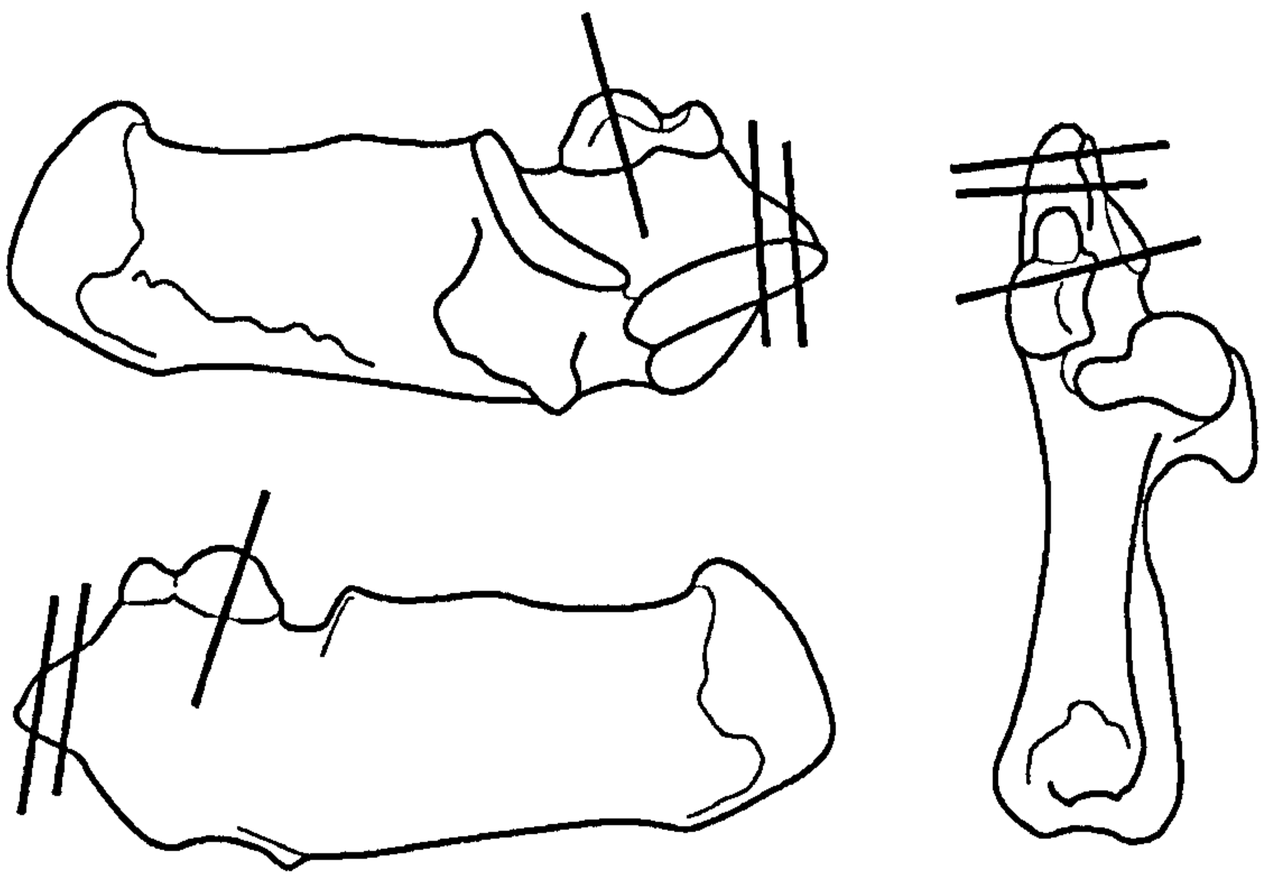
C5
Phase W 52.1%
Phase X-Y 50.0%
Phase Y 32.6%
Phase Y-Z 46.7%
Phase Z 41.3%

C6
Phase W 41.7%
Phase X-Y 50.0%
Phase Y 41.9%
Phase Y-Z 23.3%
Phase Z 51.3%

Figure 52 cont. Cattle: Butchery: Calcaneum: Inter-site comparison, using Maltby's (1989: 100, Table 10) categories (expressed as a percentage of butchered NISP)



C7
Phase W 2.1%
Phase X-Y 9.4%
Phase Y 4.7%
Phase Y-Z 13.3%
Phase Z 13.8%

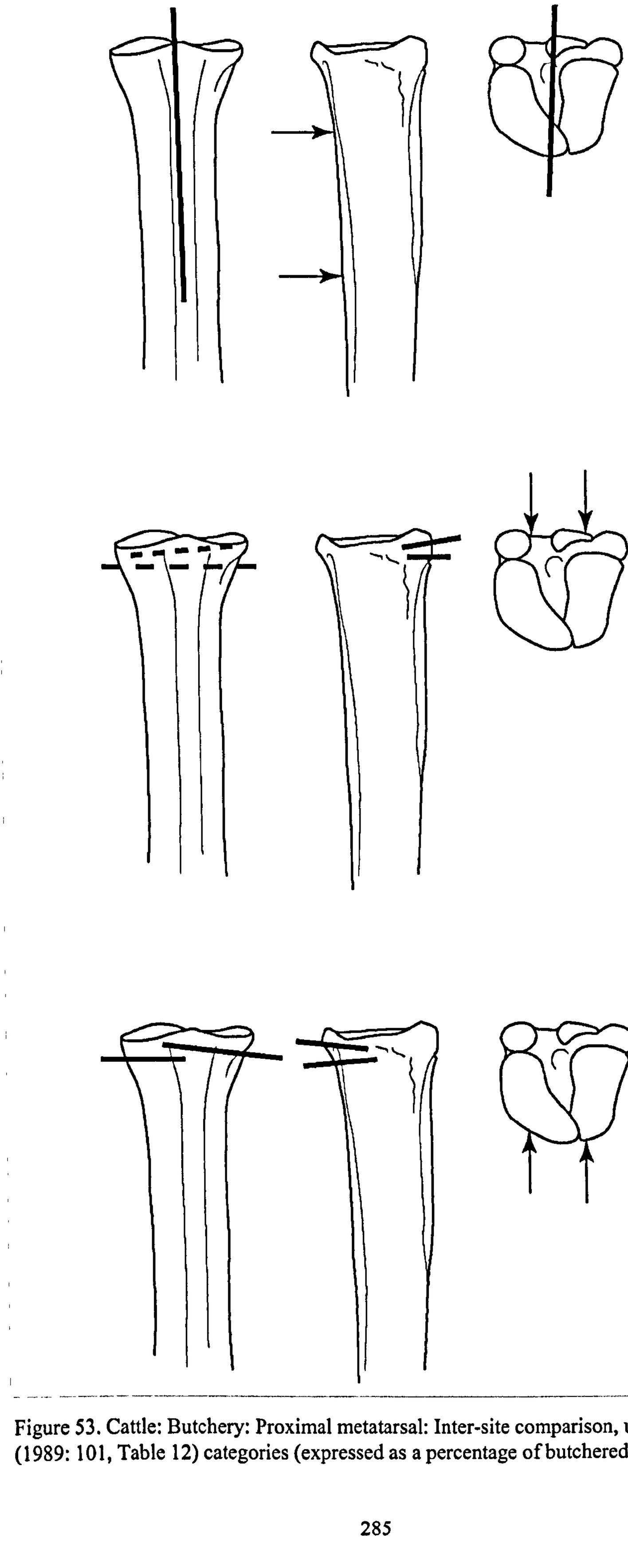


C8
Phase W 2.1%
Phase X-Y 6.3%
Phase Y 4.7%
Phase Y-Z 23.3%
Phase Z 11.3%

Figures are based on the following number of observations:

Phase W = 48
Phase X-Y = 32
Phase Y = 43
Phase Y-Z = 30
Phase Z = 80

Figure 52 cont. Cattle: Butchery: Calcaneum: Inter-site comparison, using Maltby's (1989: 100, Table 10) categories (expressed as a percentage of butchered NISP)

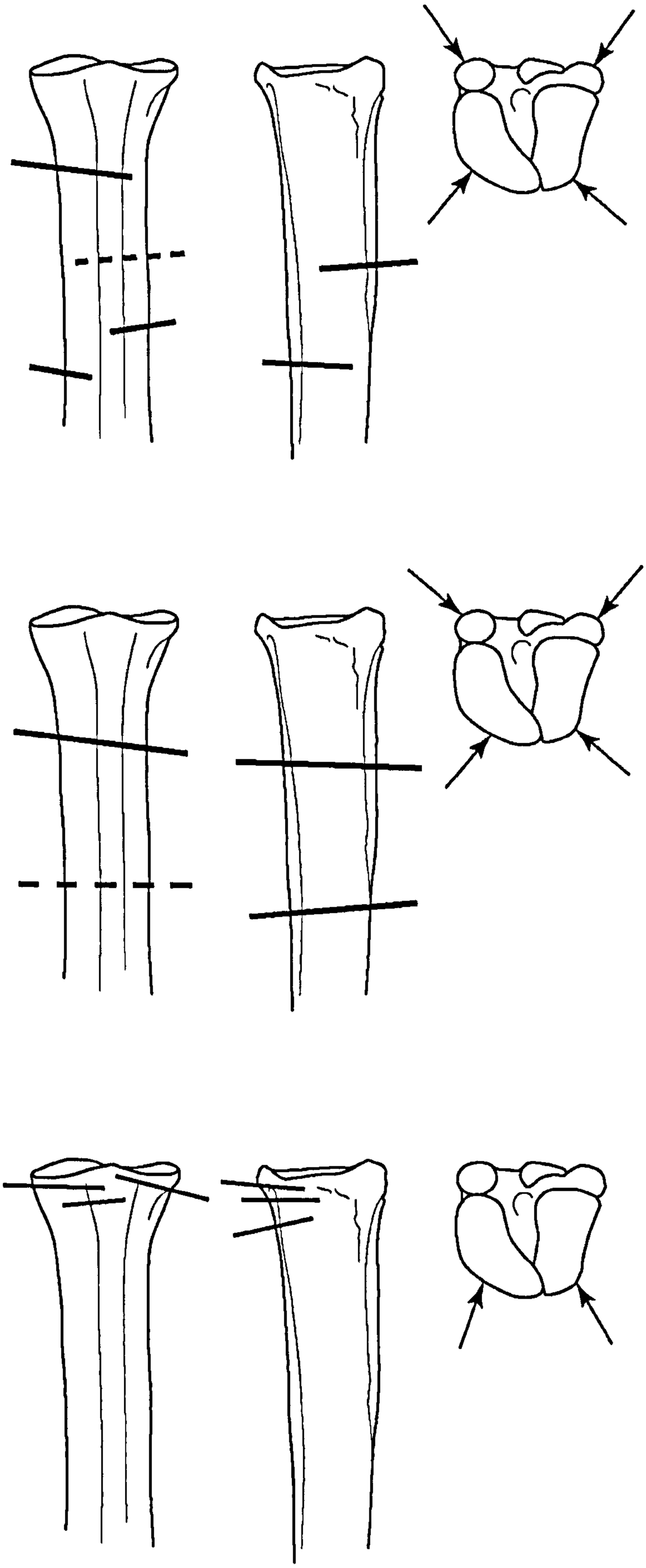


M1/2/4
Phase W 29.4%
Phase X-Y 18.2%
Phase Y 13.3%
Phase Y-Z 7.1%
Phase Z 18.2%

M5
Phase W 79.4%
Phase X-Y 68.2%
Phase Y 60.0%
Phase Y-Z 75.0%
Phase Z 77.3%

M6
Phase W 2.9%
Phase X-Y 0.0%
Phase Y 6.7%
Phase Y-Z 3.6%
Phase Z 6.8%

Figure 53. Cattle: Butchery: Proximal metatarsal: Inter-site comparison, using Maltby's (1989: 101, Table 12) categories (expressed as a percentage of butchered NISP)

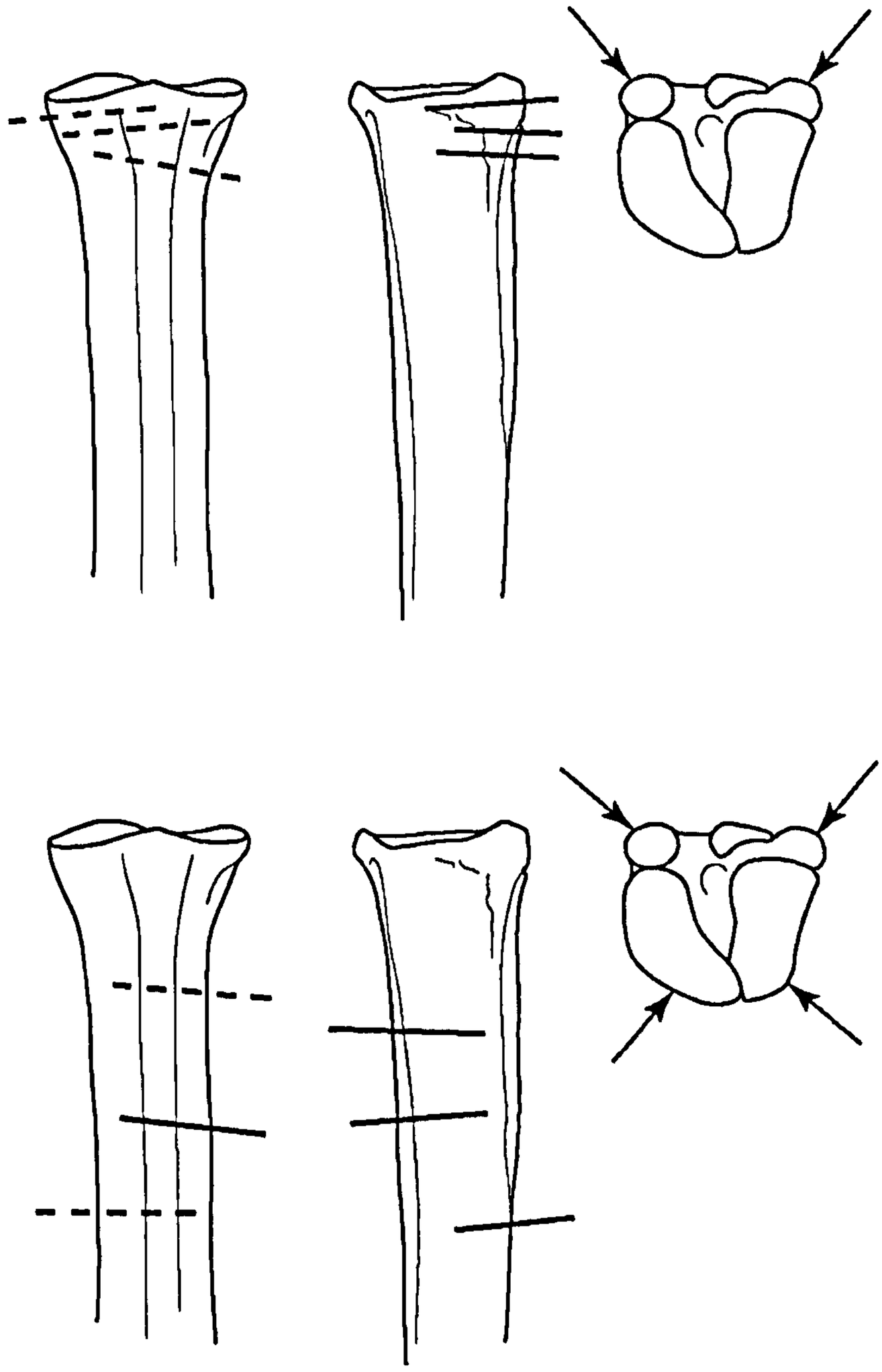


M7
Phase W 14.7%
Phase X-Y 18.2%
Phase Y 13.3%
Phase Y-Z 17.9%
Phase Z 4.5%

M8
Phase W 67.6%
Phase X-Y 77.3%
Phase Y 86.7%
Phase Y-Z 85.7%
Phase Z 77.3%

M10
Phase W 5.9%
Phase X-Y 13.6%
Phase Y 26.7%
Phase Y-Z 0.0%
Phase Z 9.1%

Figure 53 cont. Cattle: Butchery: Proximal metatarsal: Inter-site comparison, using Maltby's (1989: 101, Table 12) categories (expressed as a percentage of butchered NISP)



M11
Phase W 5.9%
Phase X-Y 0.0%
Phase Y 20.0%
Phase Y-Z 7.1%
Phase Z 2.3%

M12
Phase W 0.0%
Phase X-Y 4.5%
Phase Y 0.0%
Phase Y-Z 10.7%
Phase Z 0.0%

Figures are based on the following number of observations:

Phase W = 34
Phase X-Y = 22
Phase Y = 15
Phase Y-Z = 28
Phase Z = 44

Figure 53 cont. Cattle: Butchery: Proximal metatarsal: Inter-site comparison, using Maltby's (1989: 101, Table 12) categories (expressed as a percentage of butchered NISP)

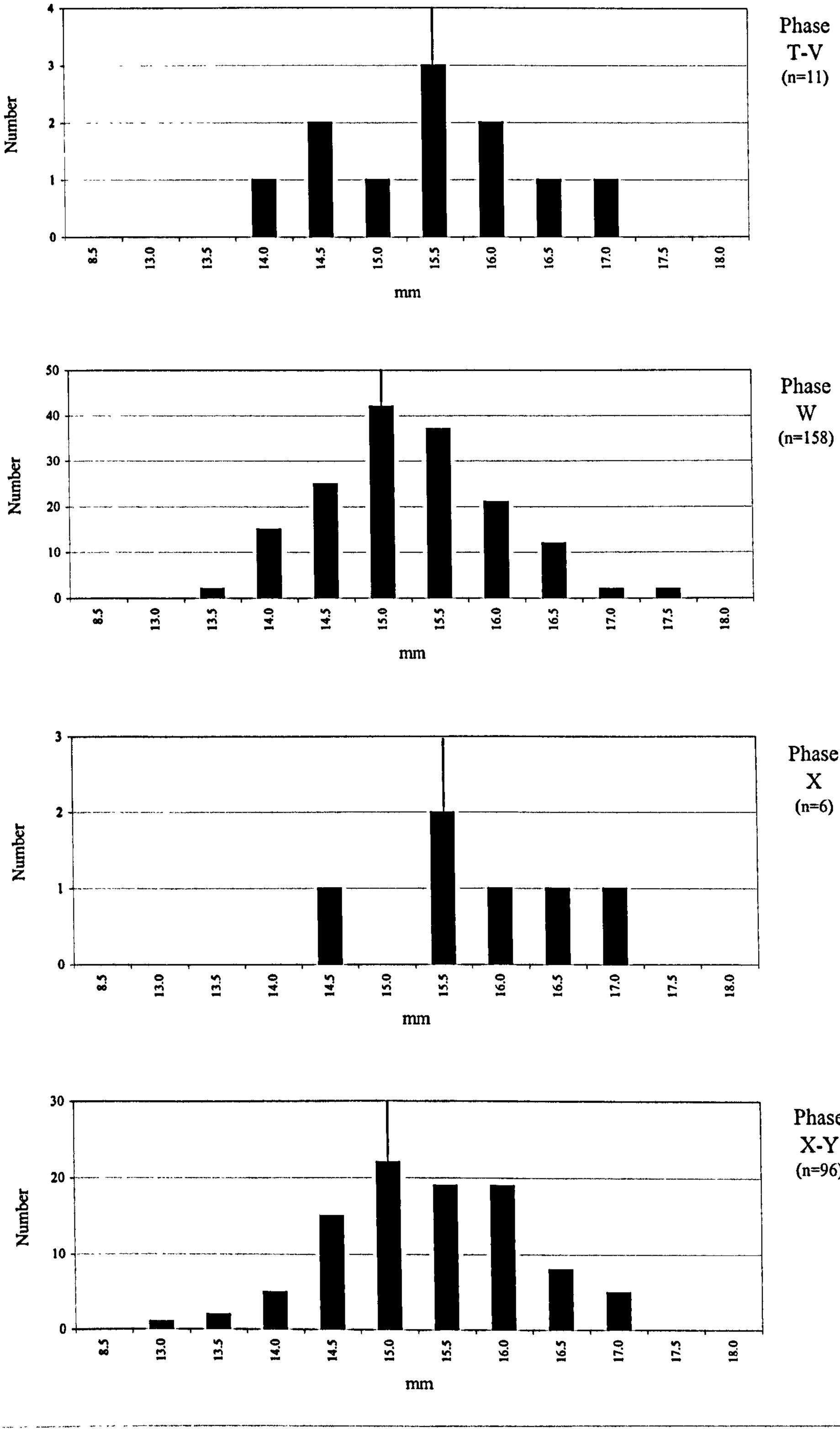


Figure 54. Cattle: Biometry: Diachronic size change: Third molar widths (W) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

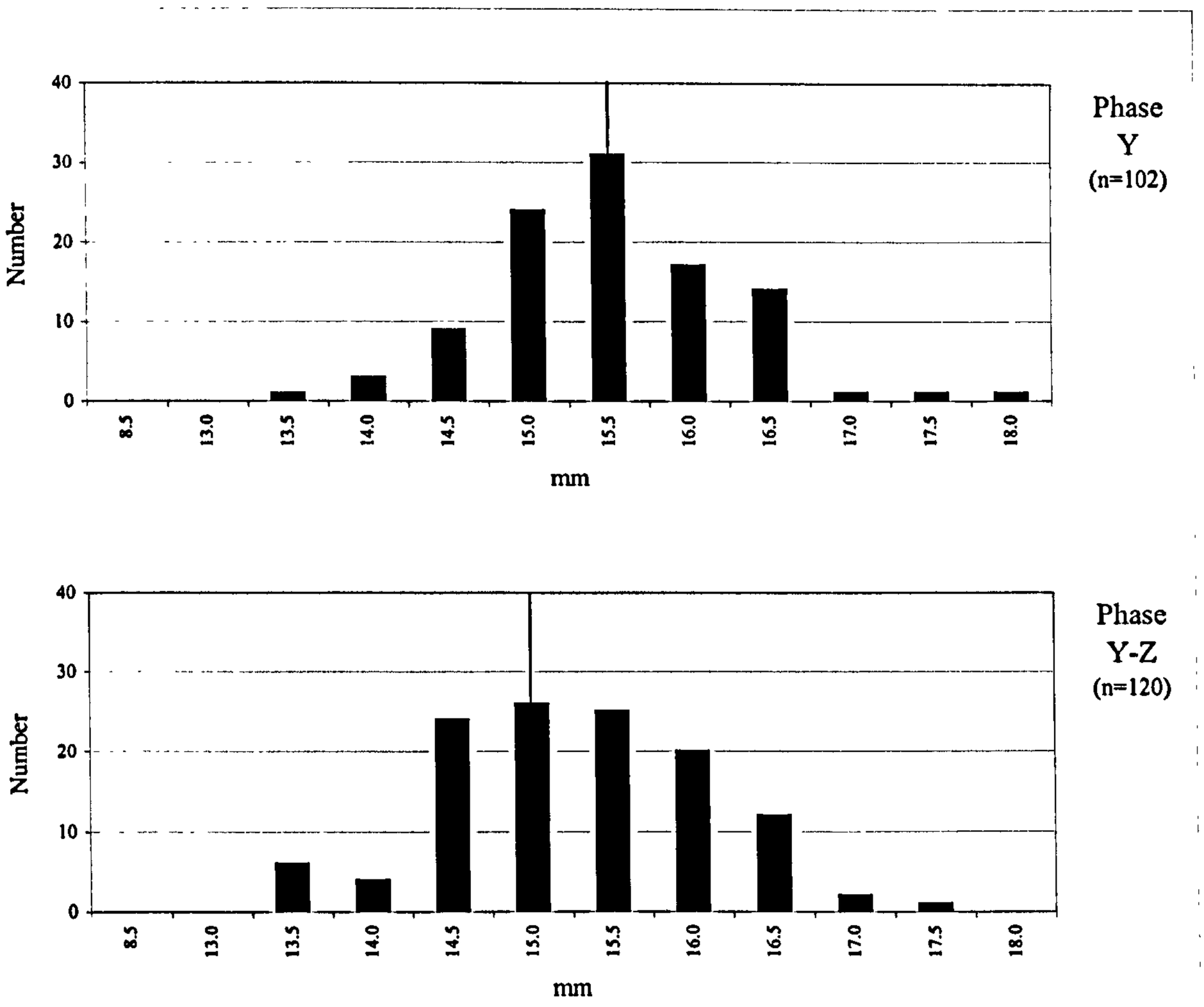


Figure 54 cont. Cattle: Biometry: Diachronic size change: Third molar widths (W) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

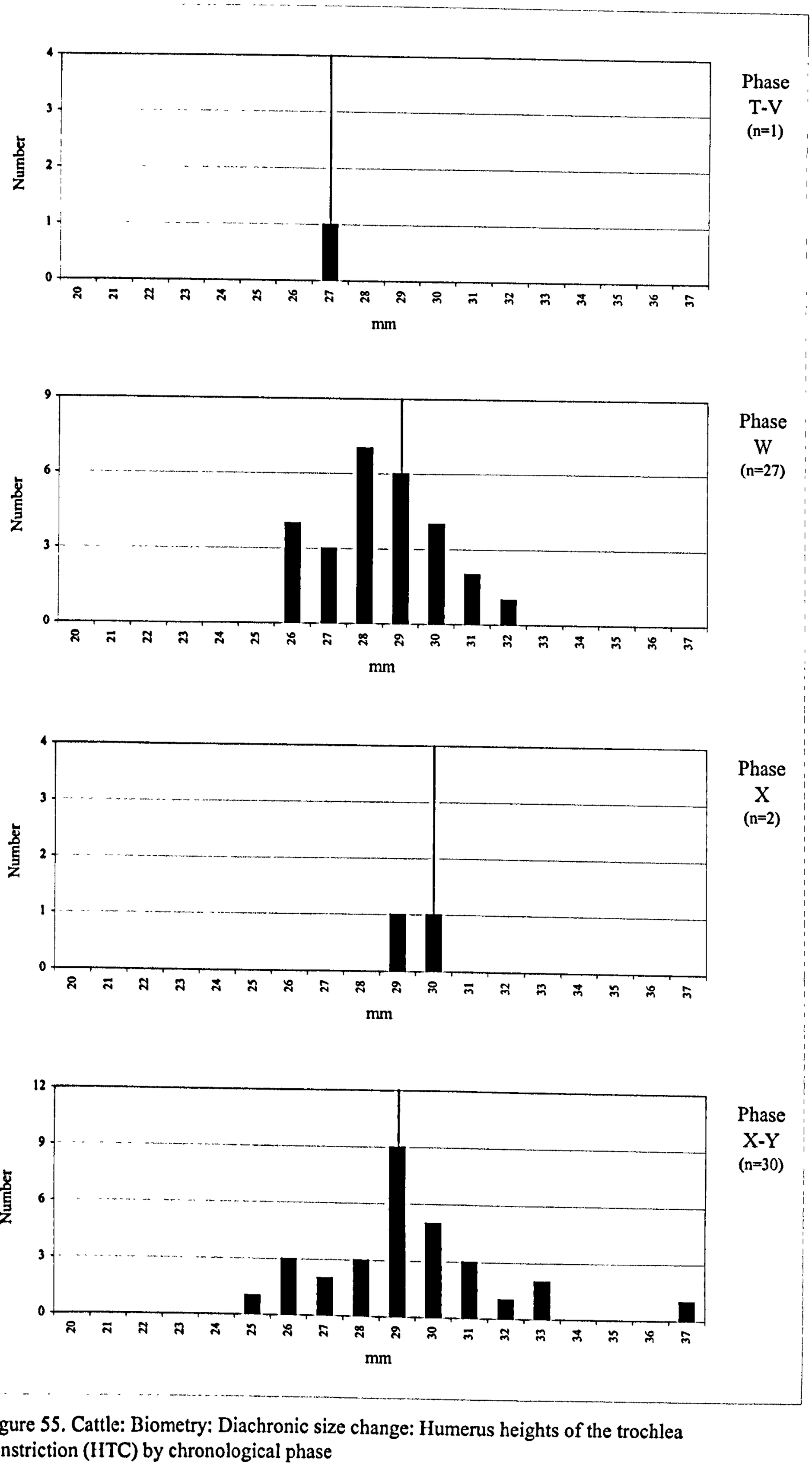


Figure 55. Cattle: Biometry: Diachronic size change: Humerus heights of the trochlea constriction (HTC) by chronological phase

NB. Figures rounded to nearest 1.0 mm; vertical line represents mean value for phase

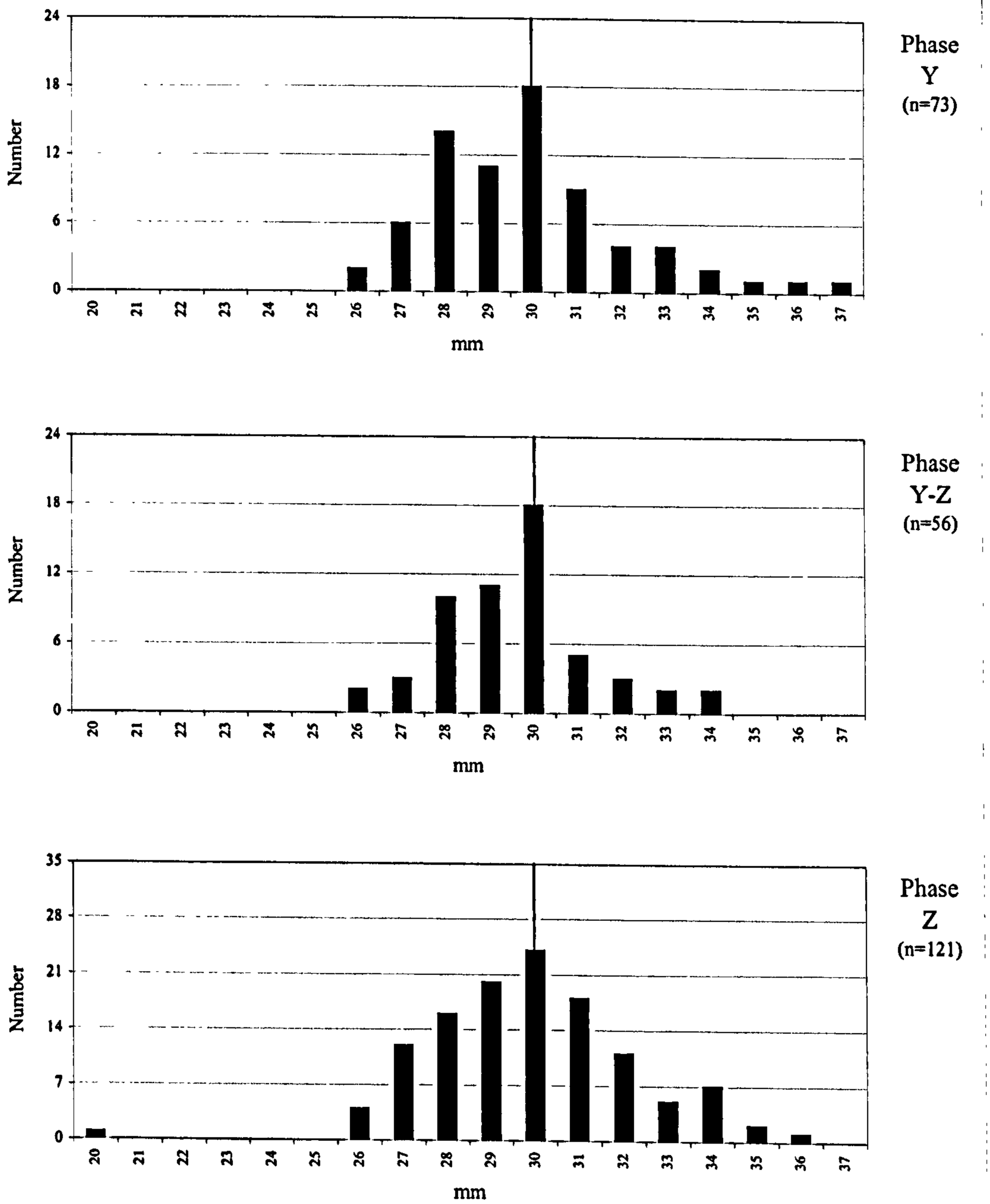


Figure 55 cont. Cattle: Biometry: Diachronic size change: Humerus heights of the trochlea constriction (HTC) by chronological phase

NB. Figures rounded to nearest 1.0 mm; vertical line represents mean value for phase

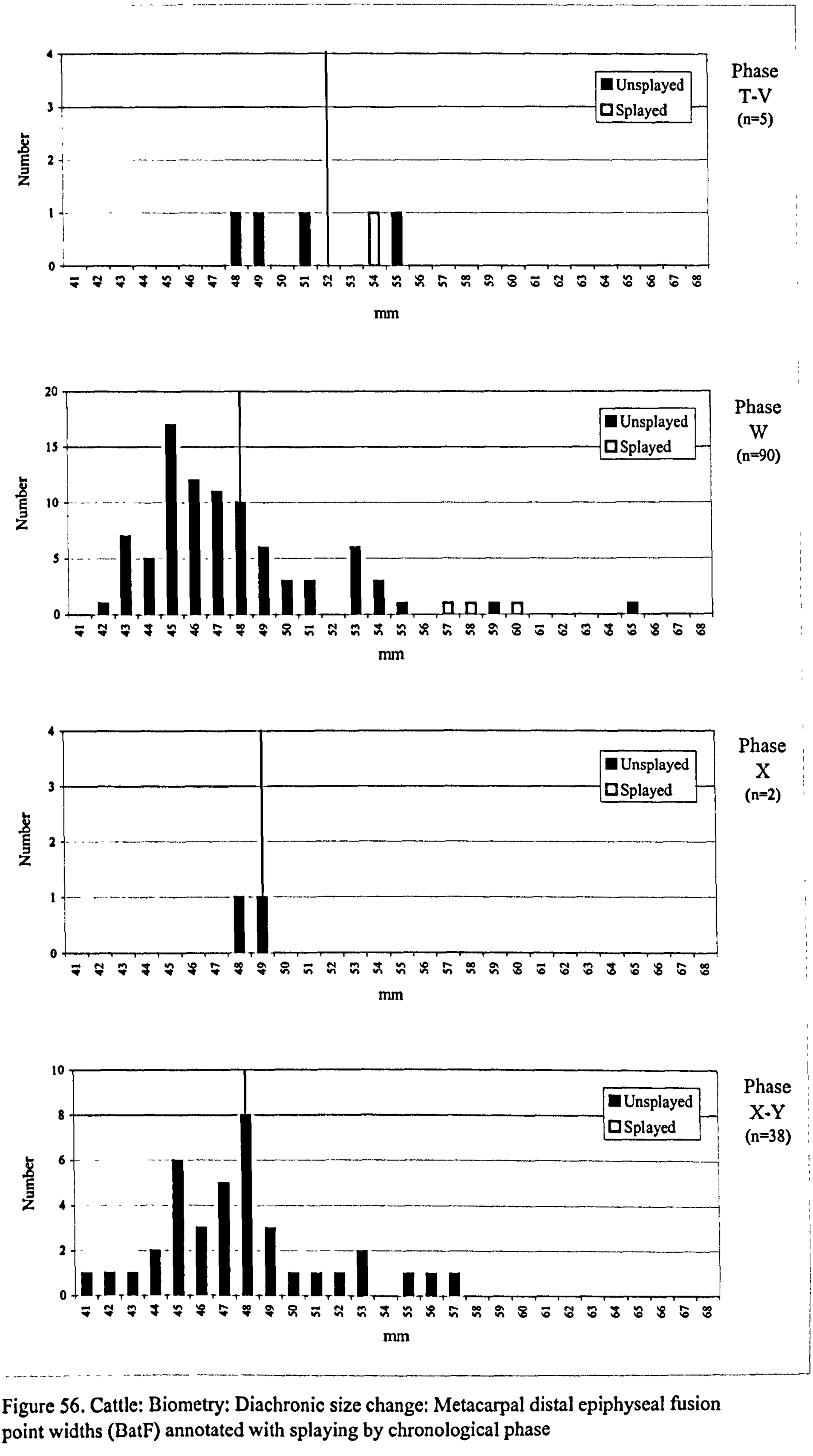


Figure 56. Cattle: Biometry: Diachronic size change: Metacarpal distal epiphyseal fusion point widths (BatF) annotated with splaying by chronological phase

NB. Figures rounded to nearest 1.0 mm; vertical line represents mean value for phase

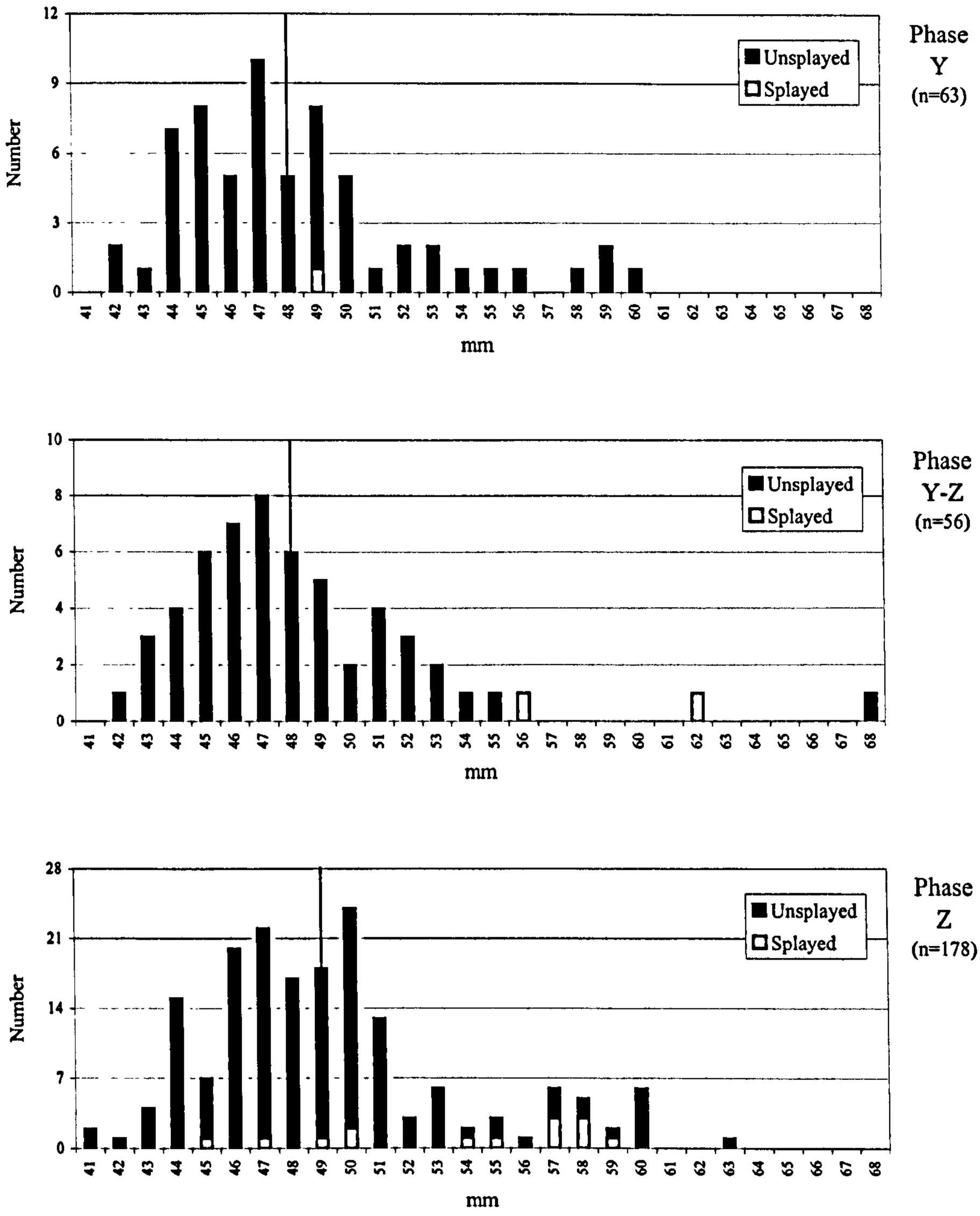


Figure 56 cont. Cattle: Biometry: Diachronic size change: Metacarpal distal epiphyseal fusion point widths (BatF) annotated with splaying by chronological phase

NB. Figures rounded to nearest 1.0 mm; vertical line represents mean value for phase

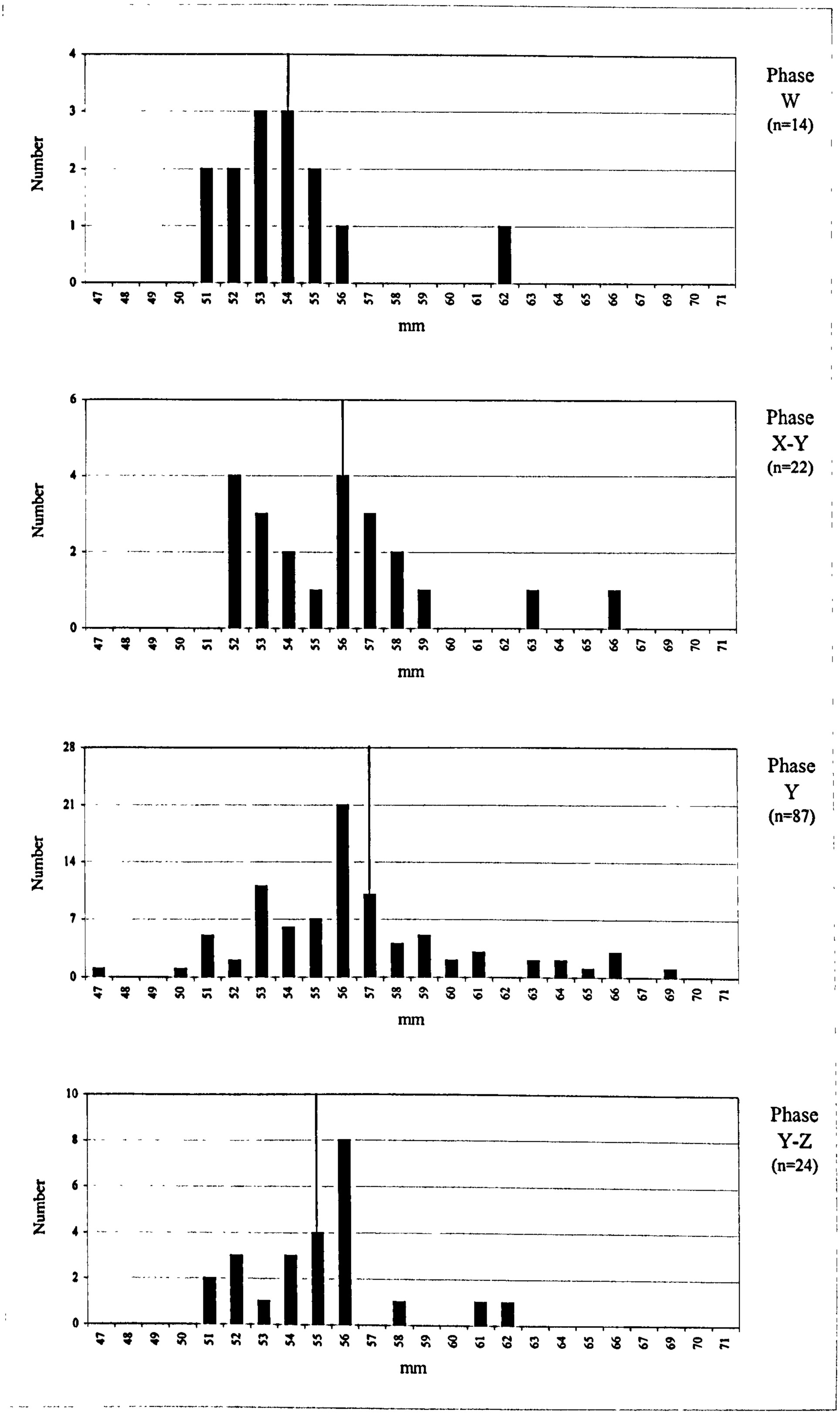


Figure 57. Cattle: Biometry: Diachronic size change: Tibia distal widths (Bd) by chronological phase

NB. Figures rounded to nearest 1.0 mm; vertical line represents mean value for phase

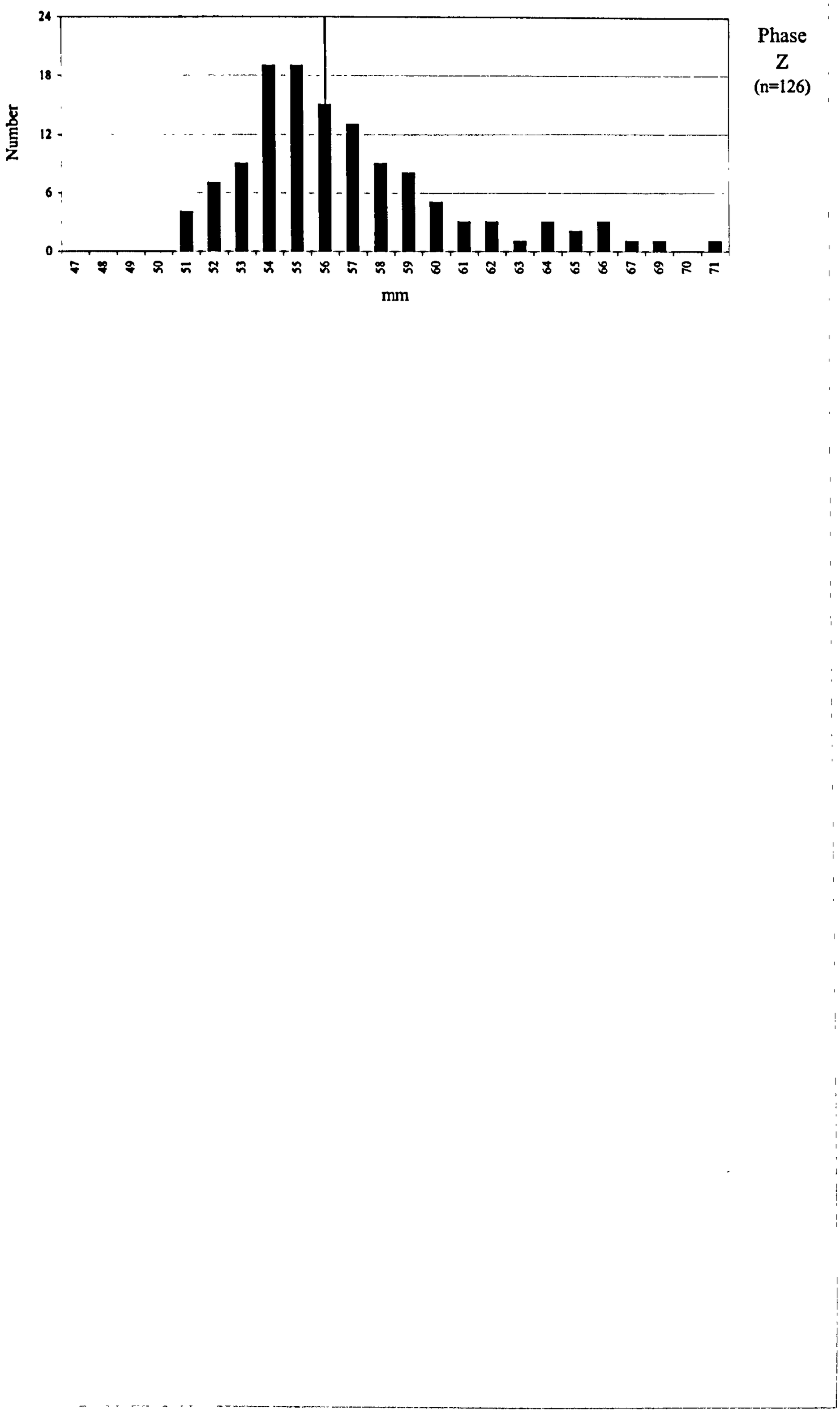


Figure 57 cont. Cattle: Biometry: Diachronic size change: Tibia distal widths (Bd) by chronological phase

NB. Figures rounded to nearest 1.0 mm; vertical line represents mean value for phase

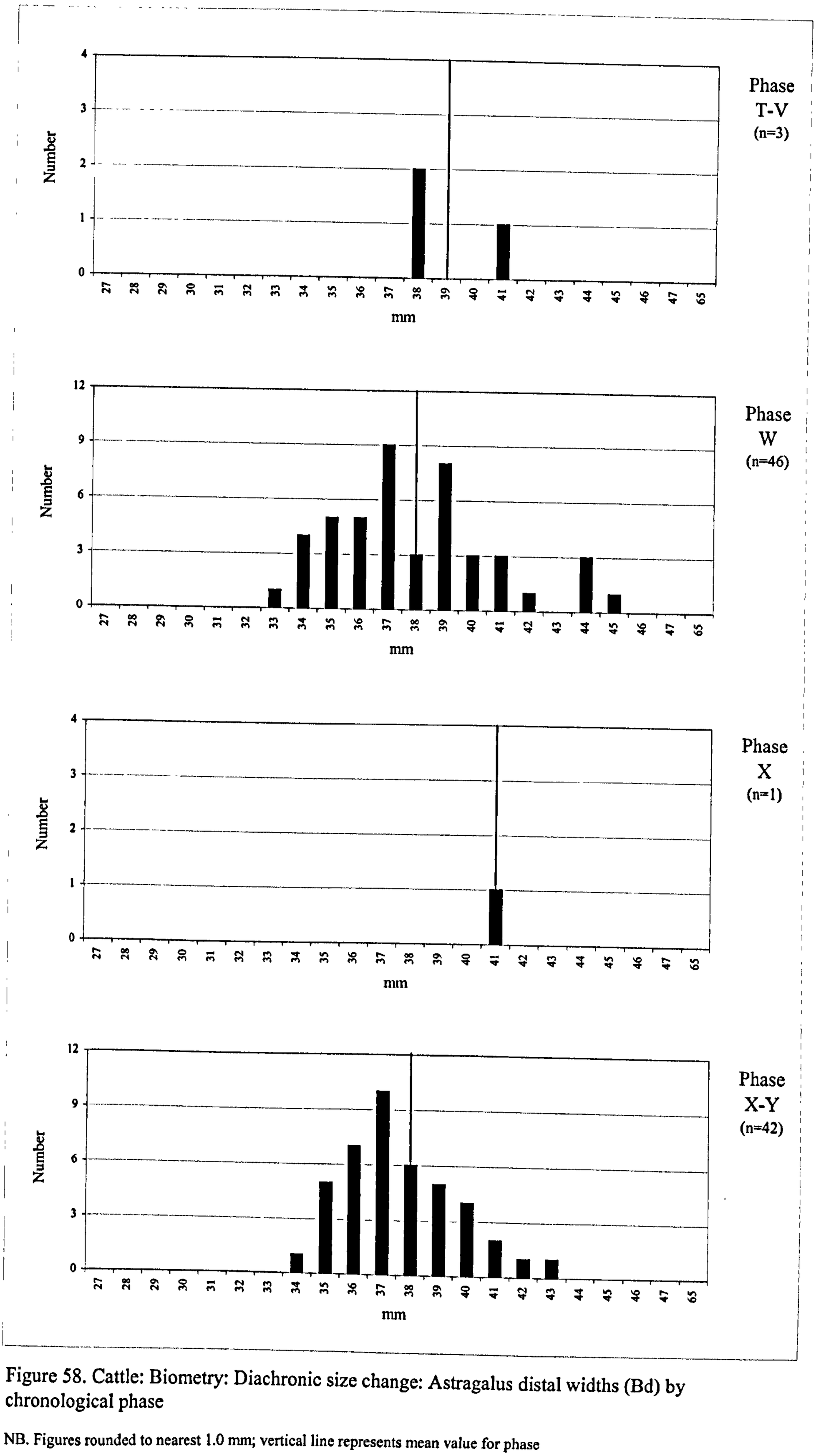


Figure 58. Cattle: Biometry: Diachronic size change: Astragalus distal widths (Bd) by chronological phase

NB. Figures rounded to nearest 1.0 mm; vertical line represents mean value for phase

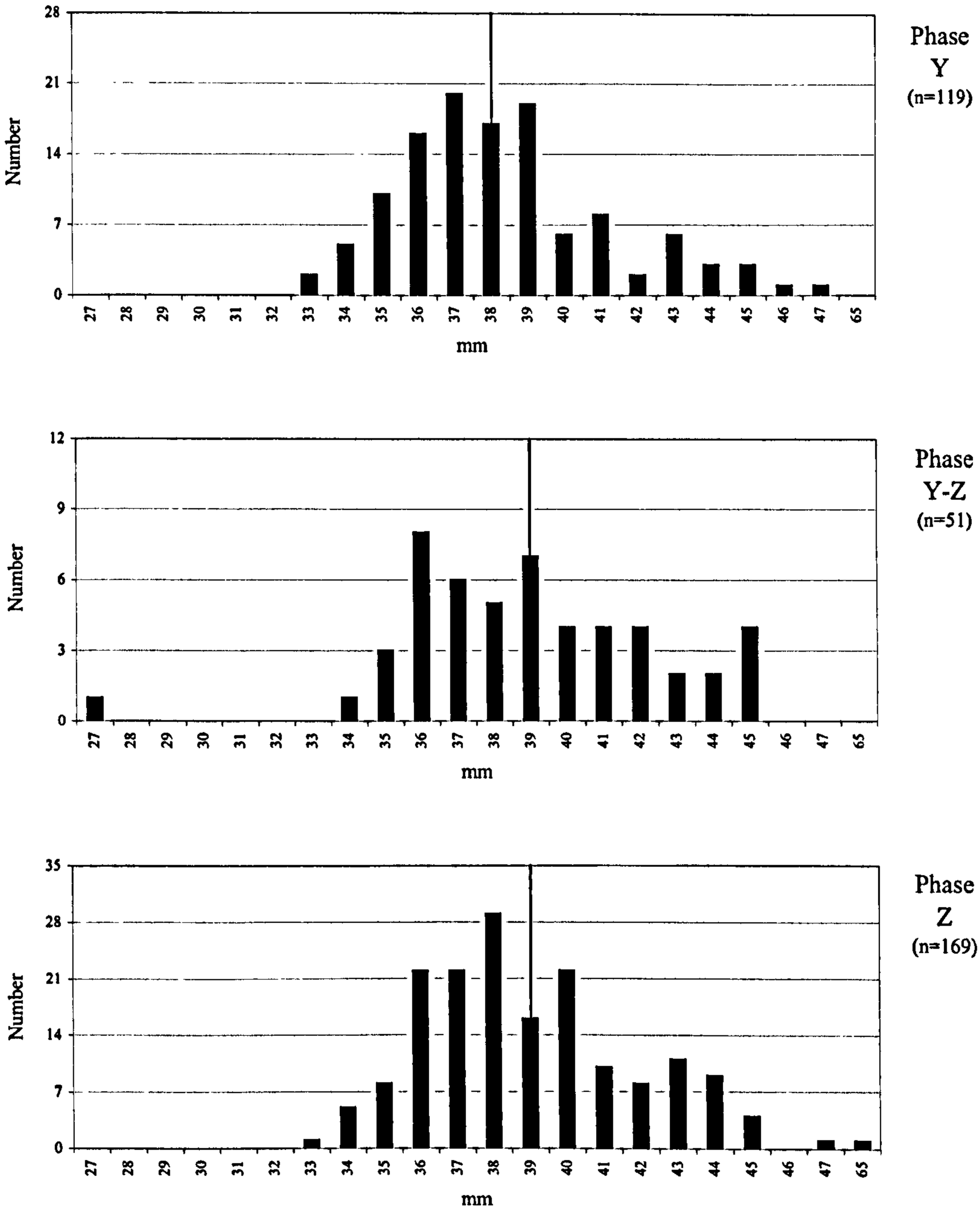


Figure 58 cont. Cattle: Biometry: Diachronic size change: Astragalus distal widths (Bd) by chronological phase

NB. Figures rounded to nearest 1.0 mm; vertical line represents mean value for phase

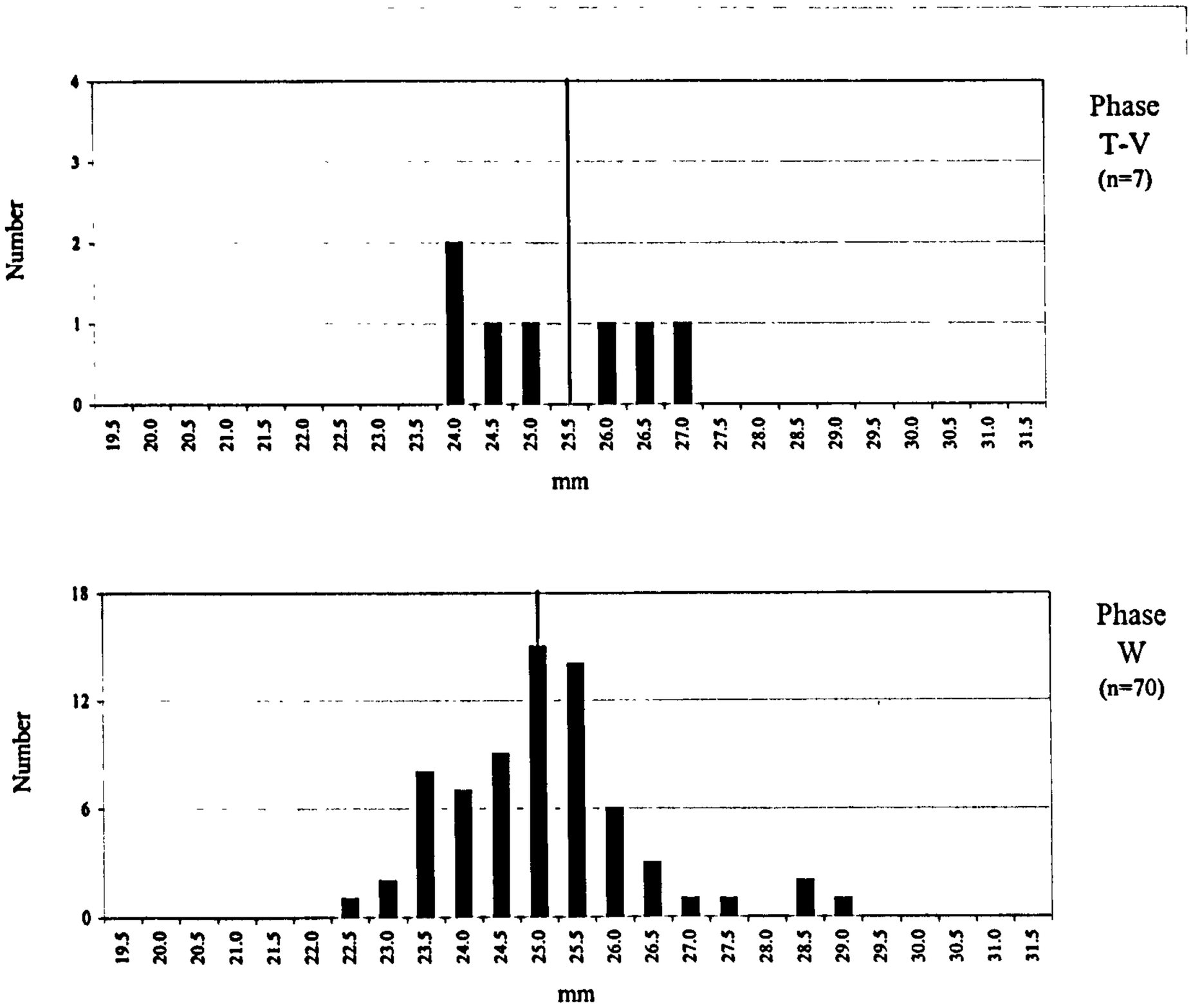


Figure 59. Cattle: Biometry: Diachronic size change: Metatarsal distal condyle depths (3) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

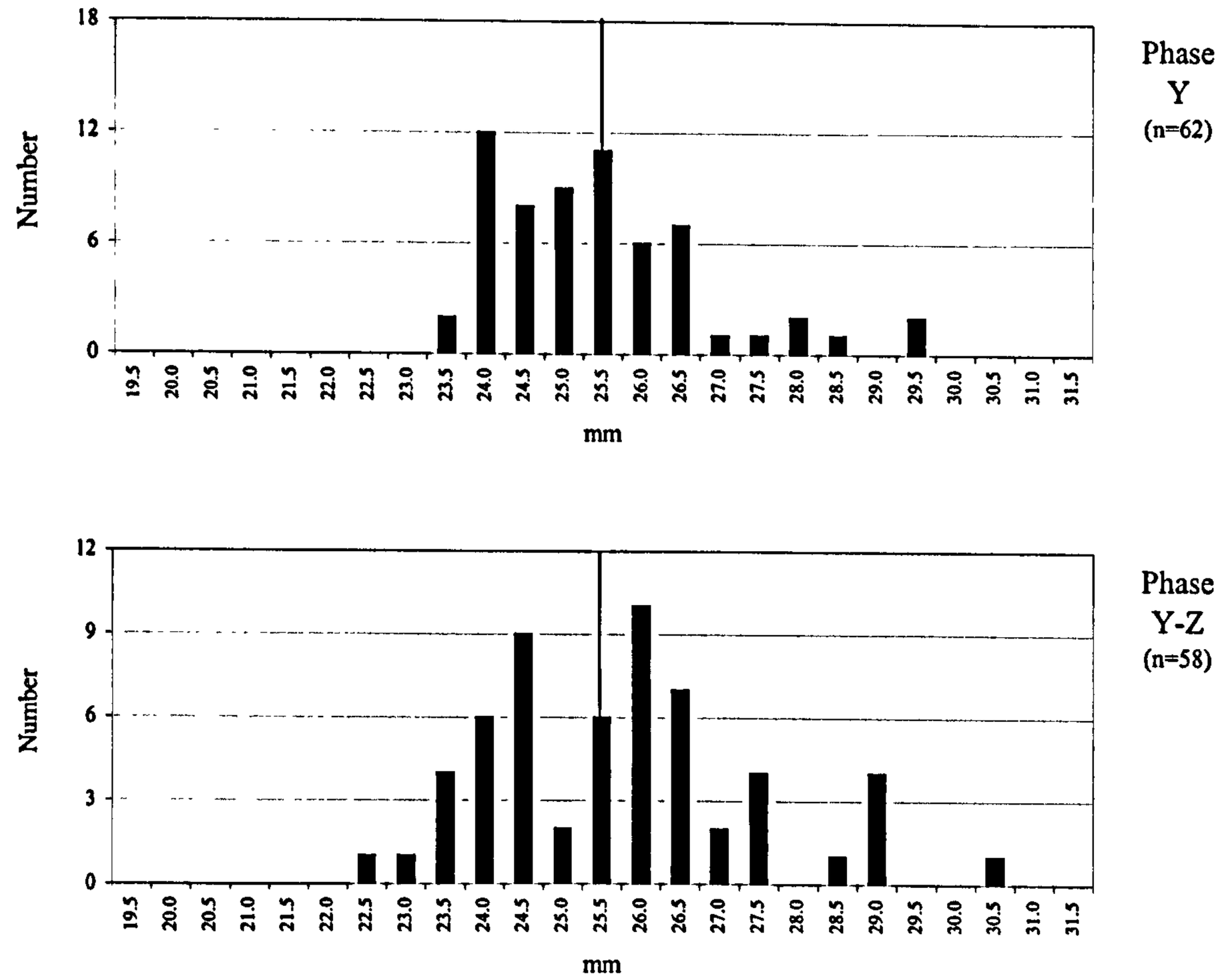
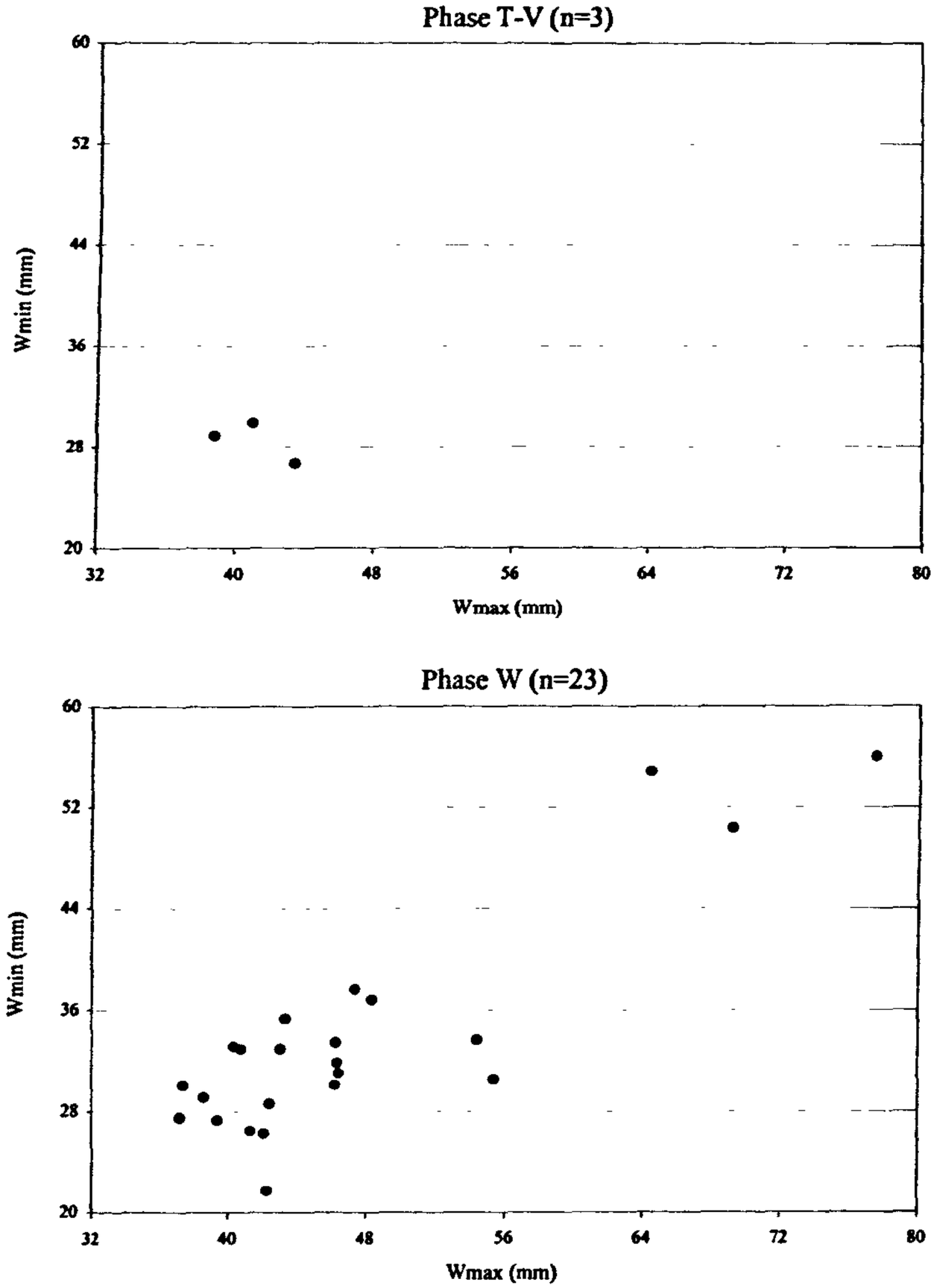


Figure 59 cont. Cattle: Biometry: Diachronic size change: Metatarsal distal condyle depths (3) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase



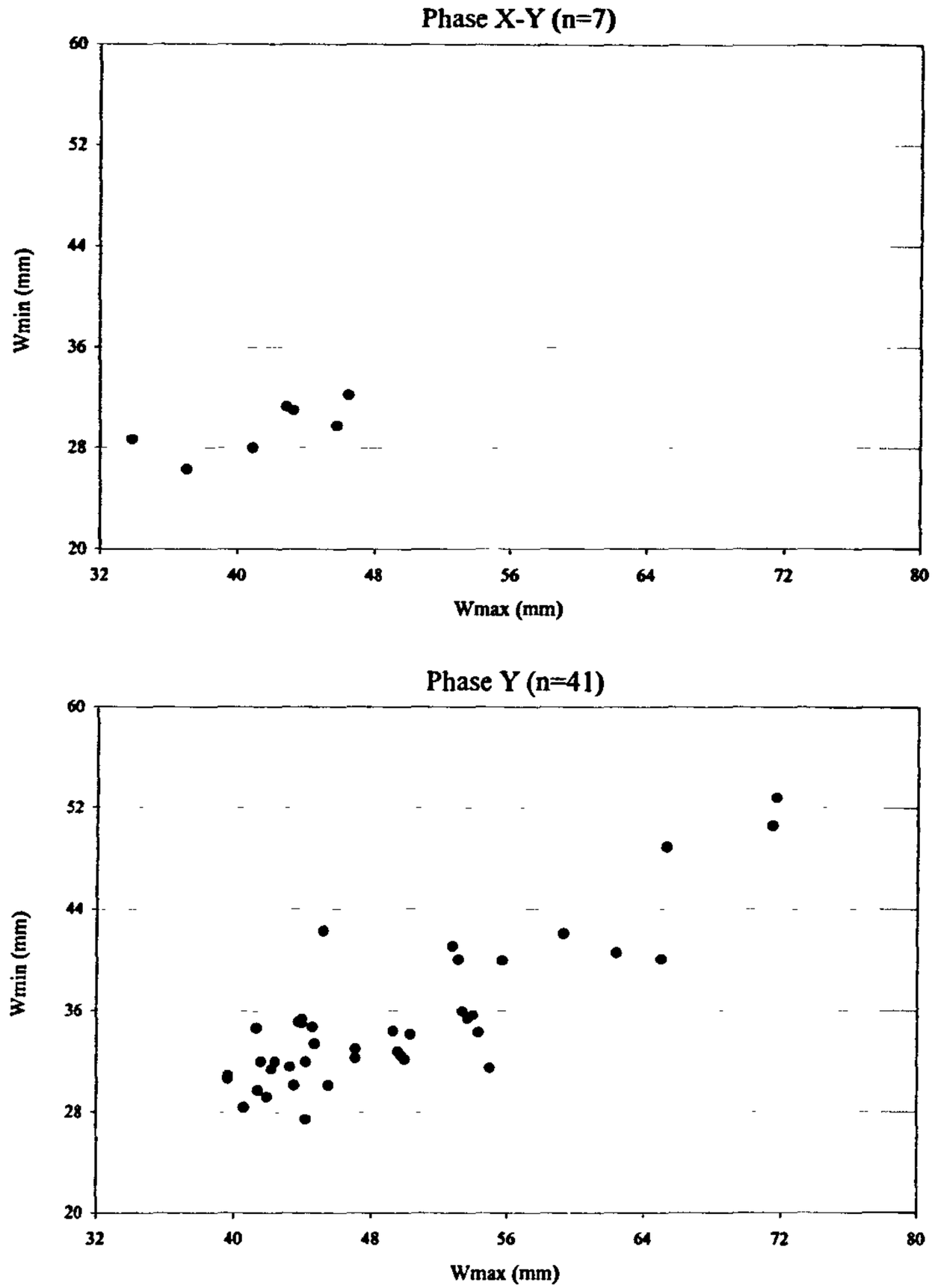
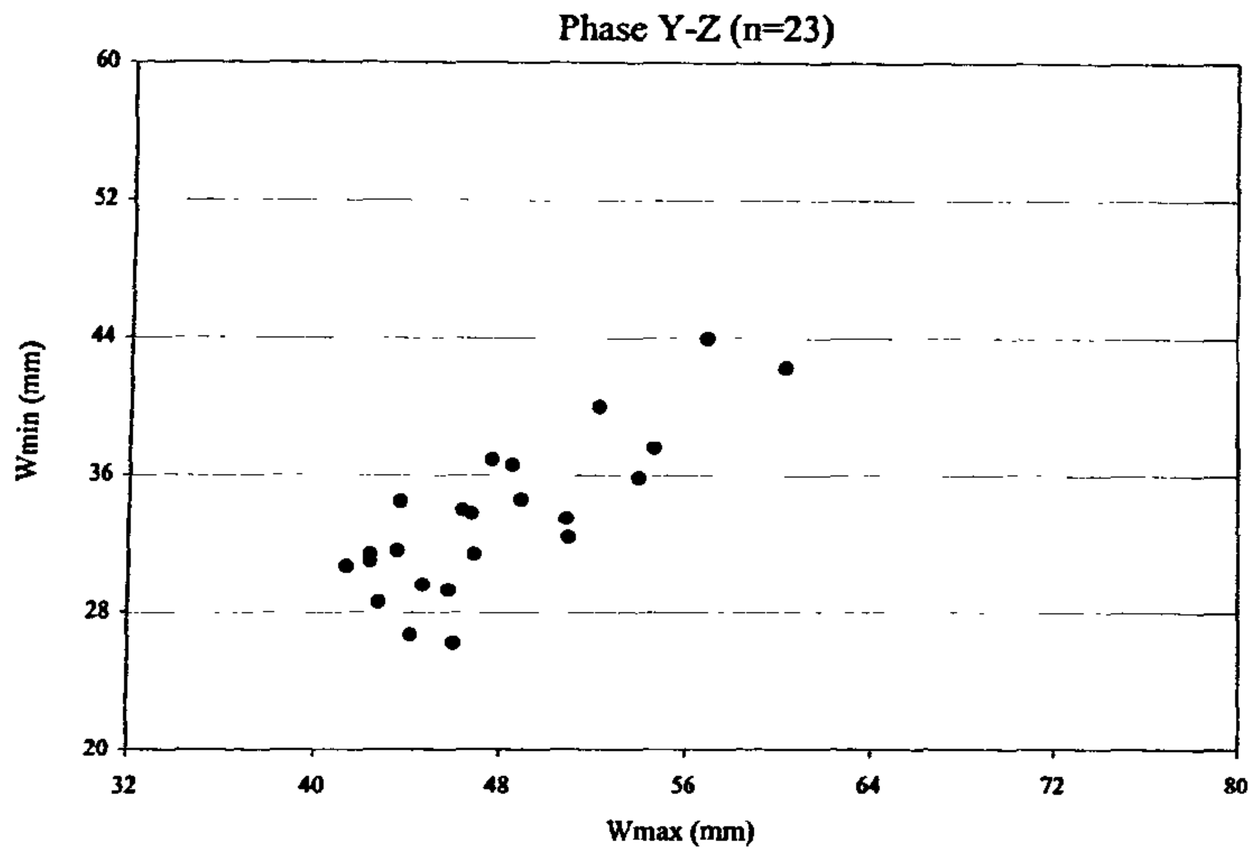


Figure 60. Cattle: Biometry: Breed and/or sex: Horncore basal shape indices (Wman by Wmin) by chronological phase



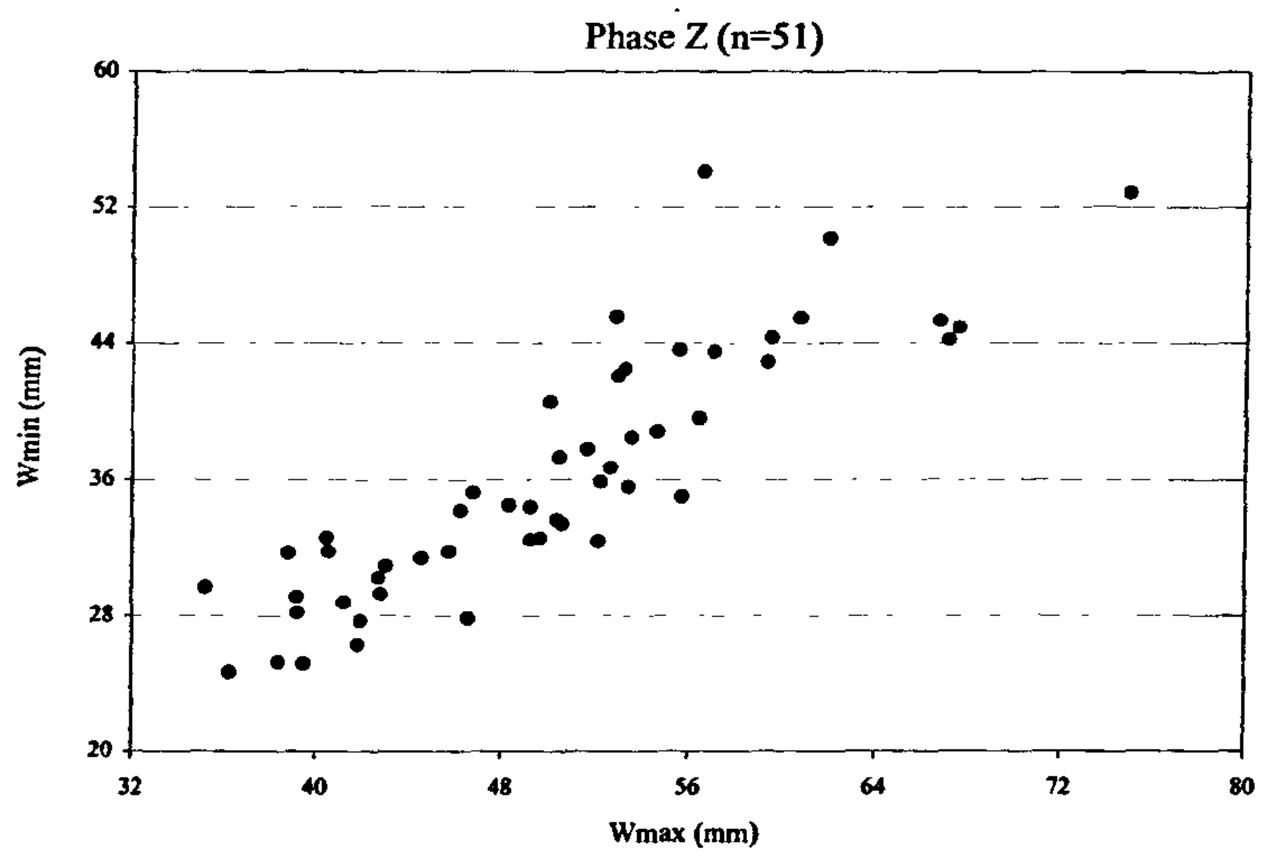


Figure 60 cont. Cattle: Biometry: Breed and/or sex: Horncore basal shape indices (Wman by Wmin) by chronological phase

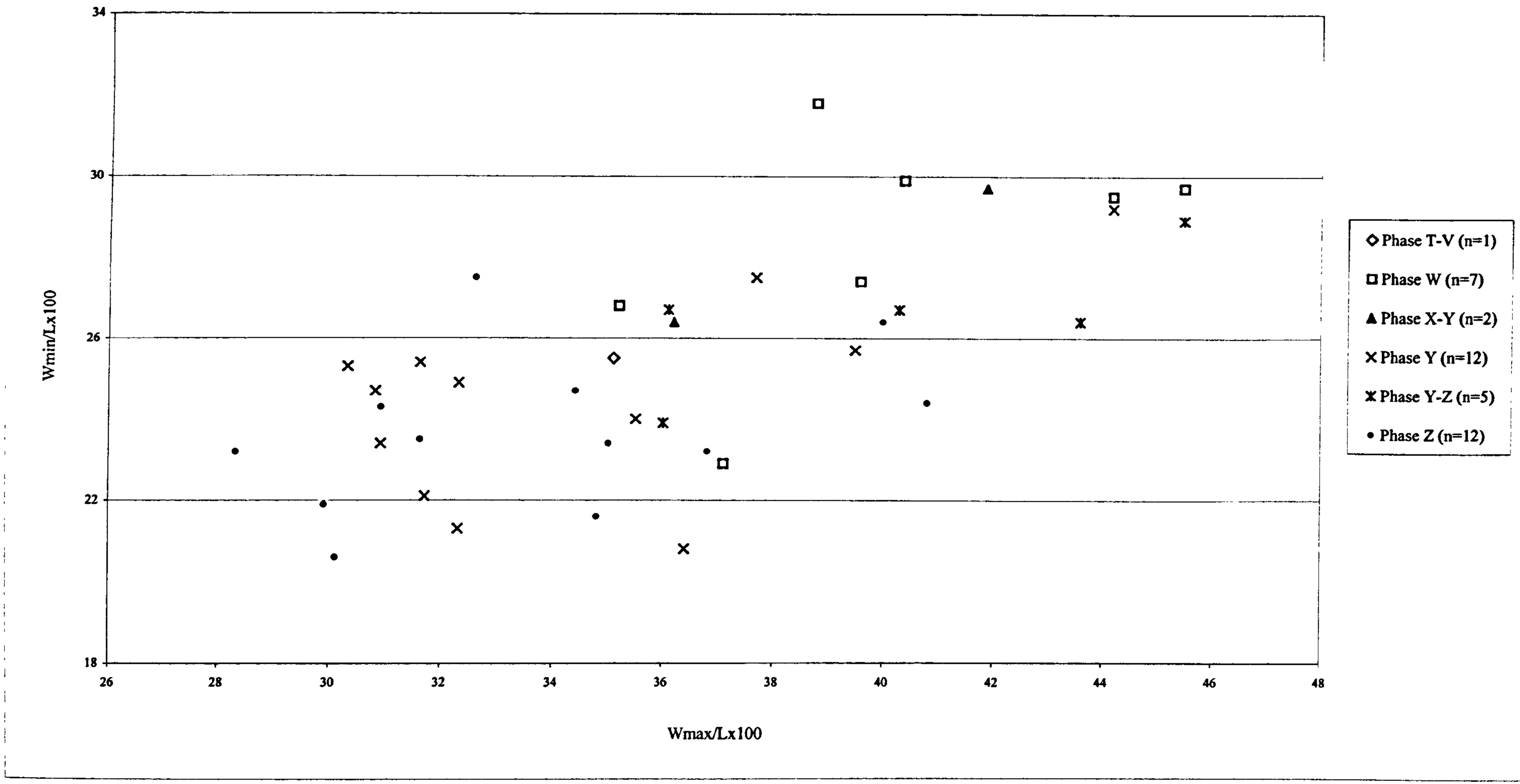
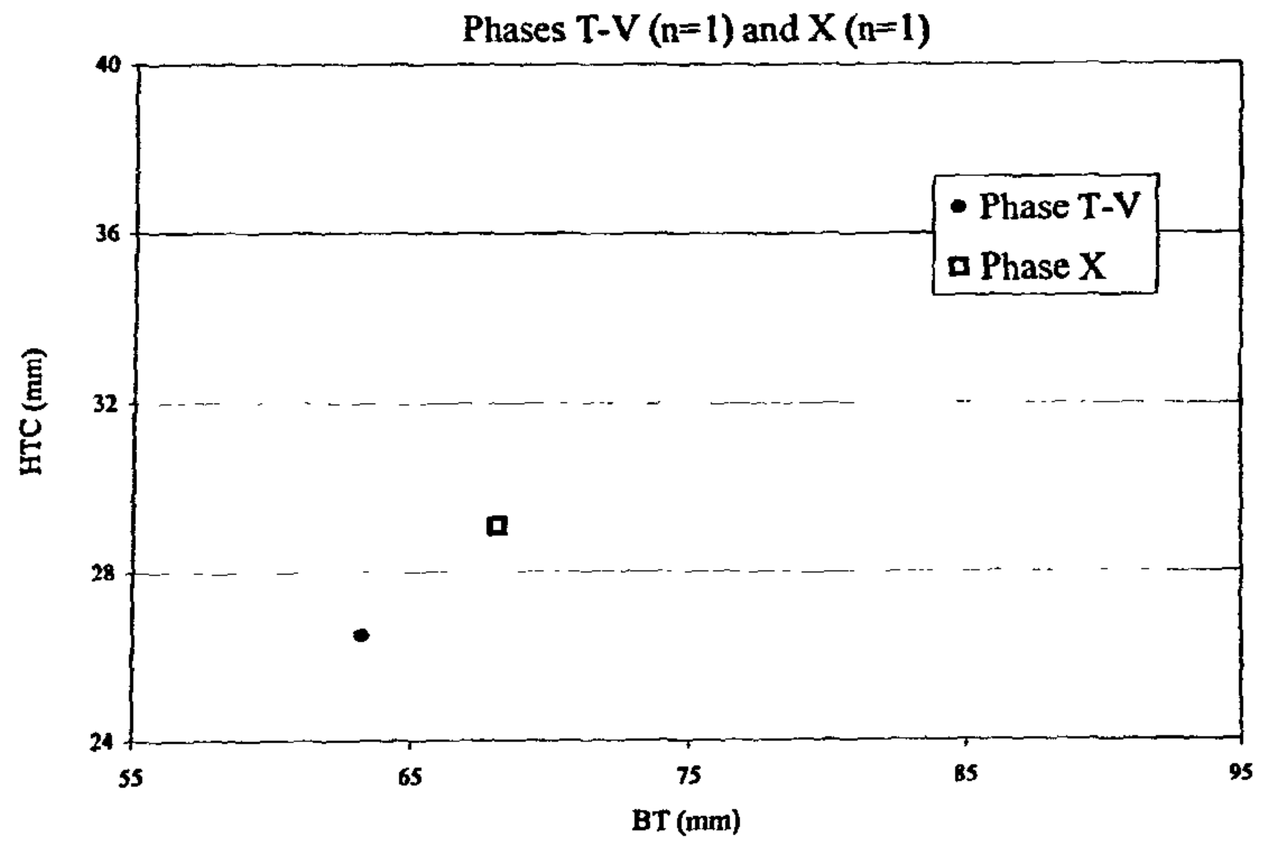
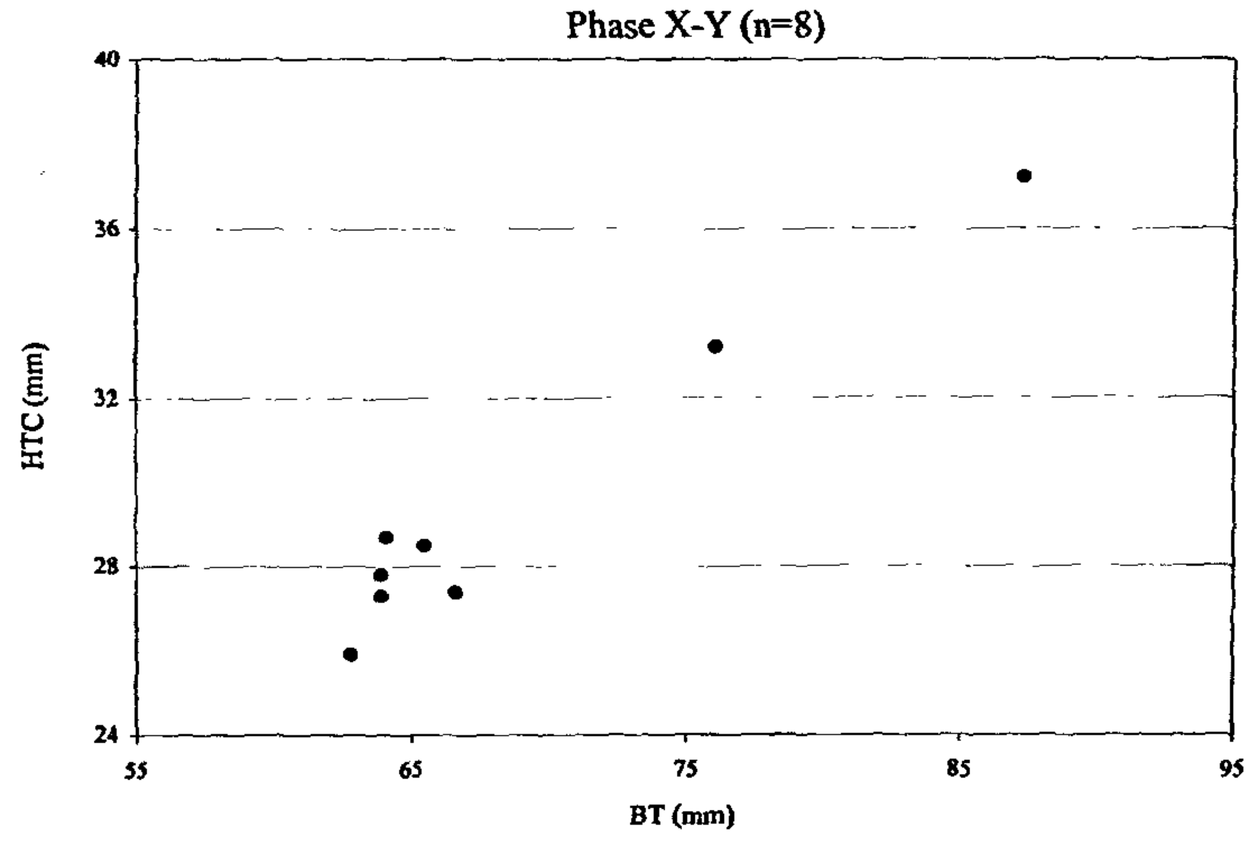
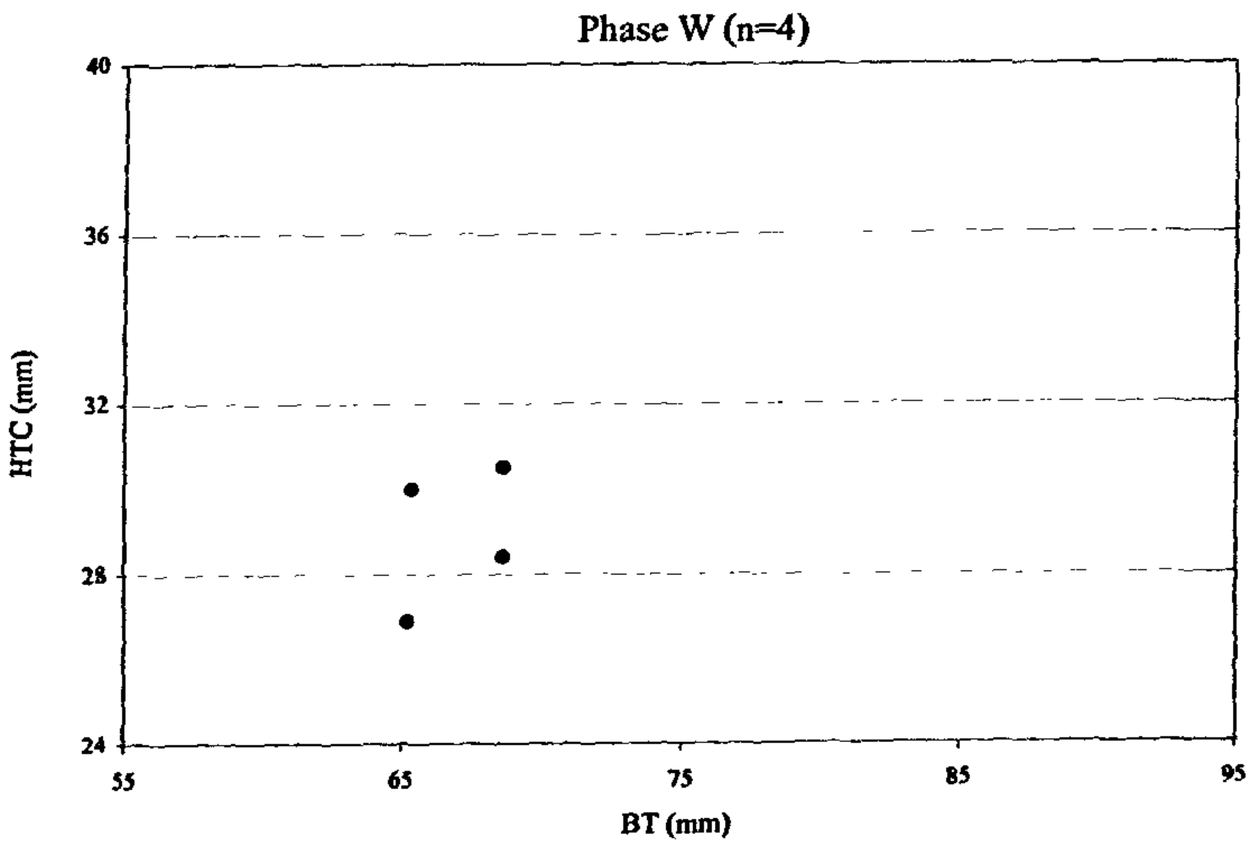


Figure 61. Cattle: Biometry: Breed and/or sex: Horncore shape indices (Wmax/Lx100 by Wmin/Lx100) by chronological phase







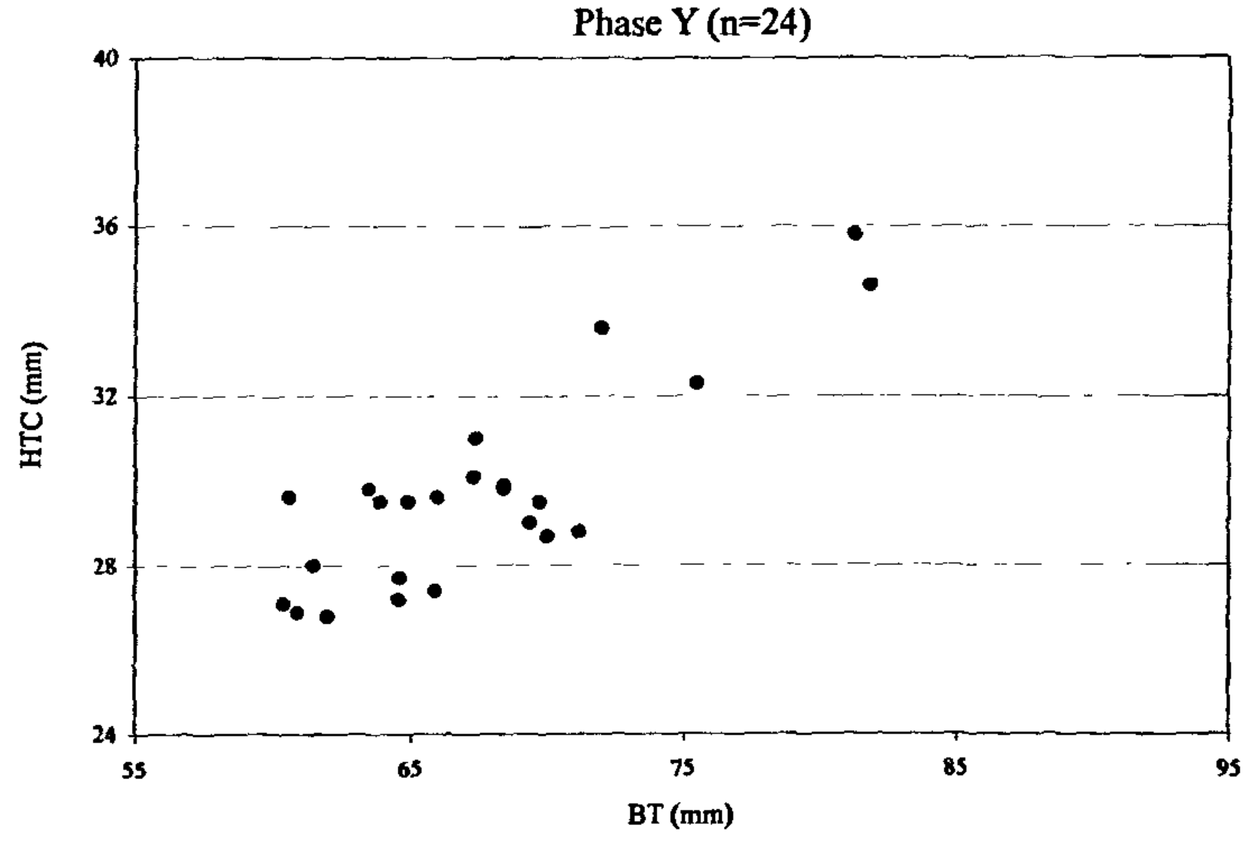


Figure 62. Cattle: Biometry: Breed and/or sex: Humerus trochlea shape indices (BT by HTC) by chronological phase

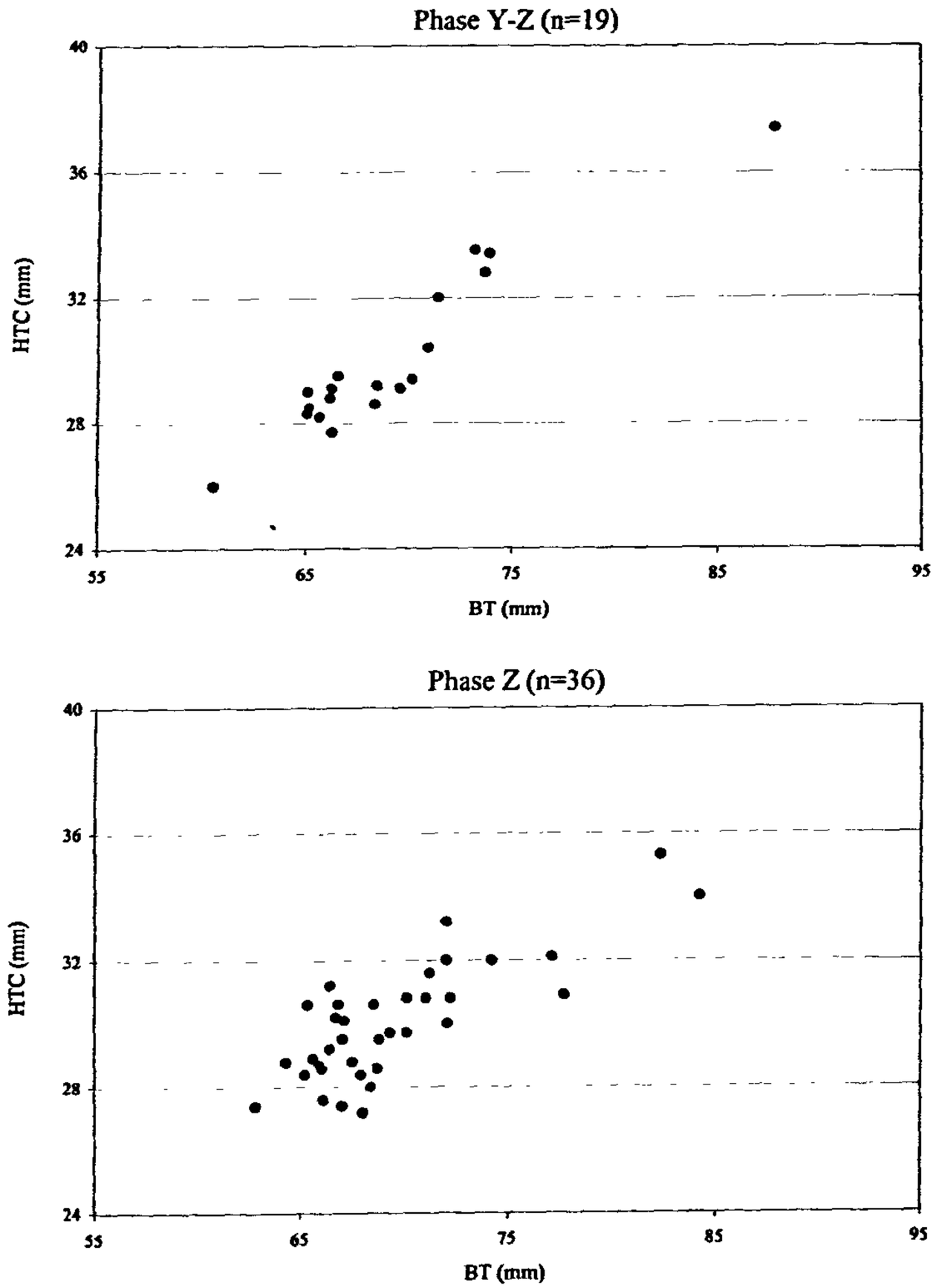
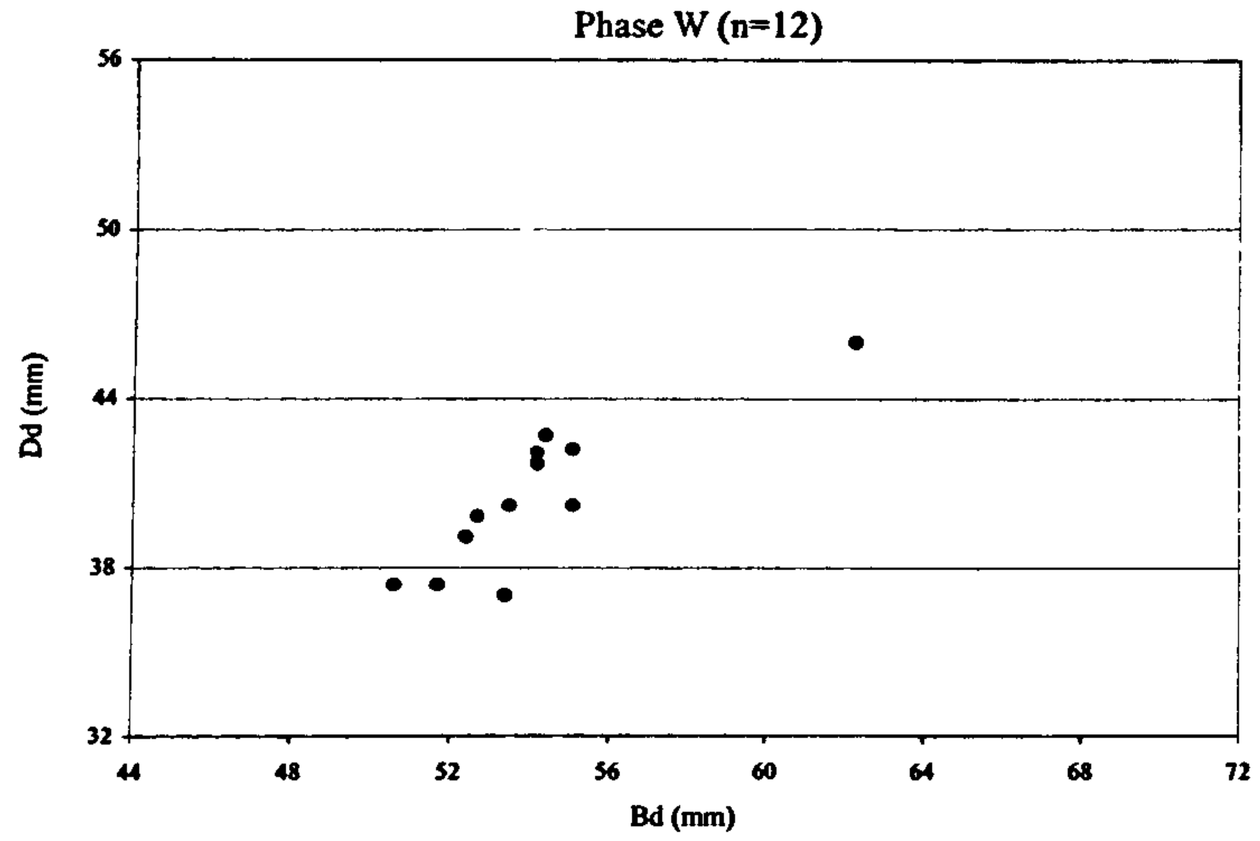
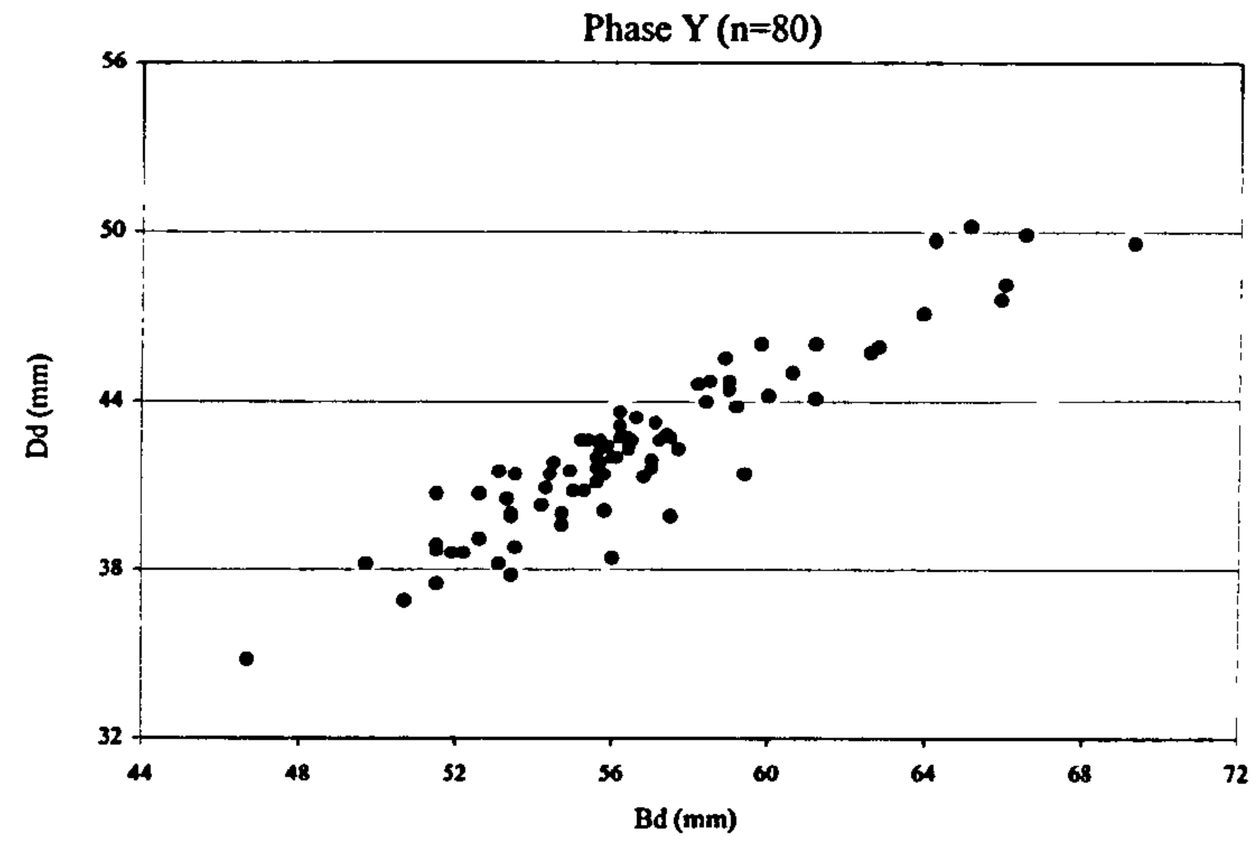
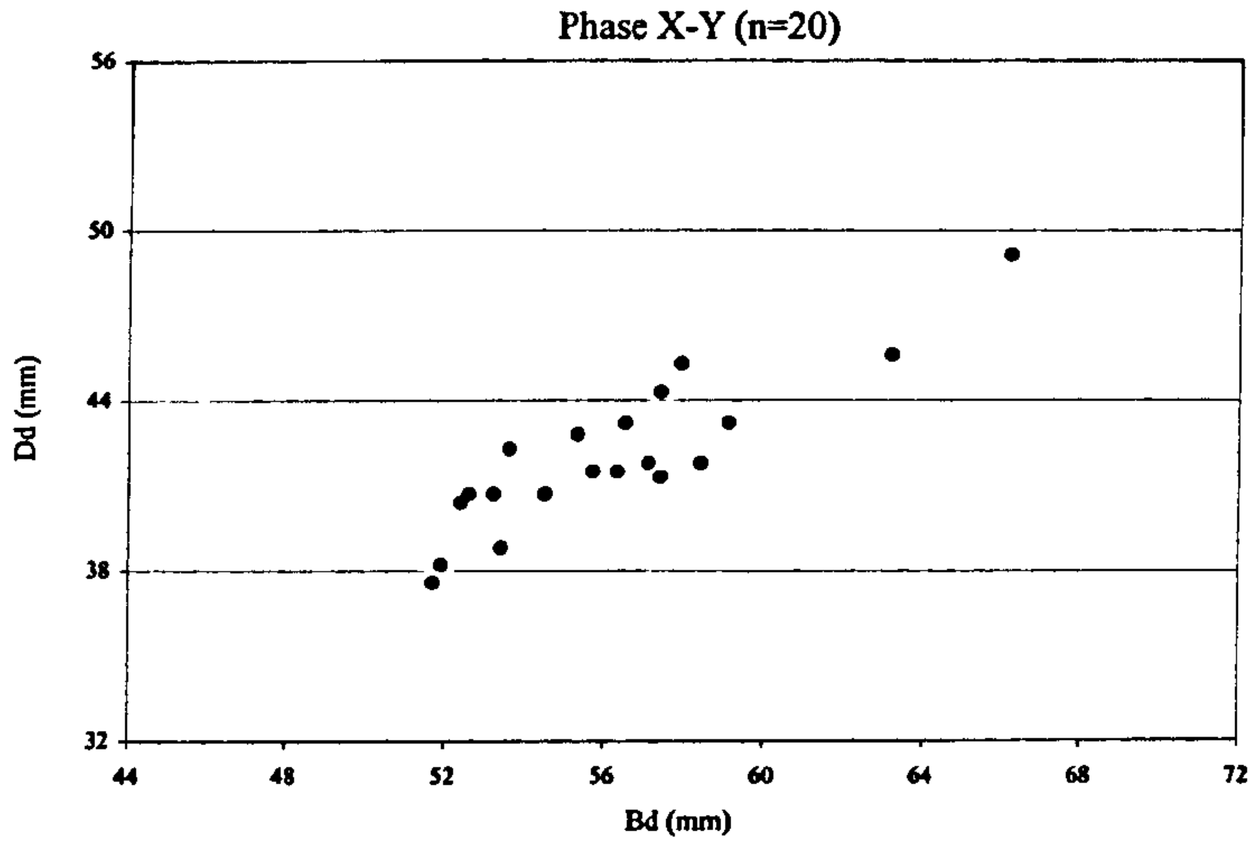


Figure 62 cont. Cattle: Biometry: Breed and/or sex: Humerus trochlea shape indices (BT by HTC) by chronological phase







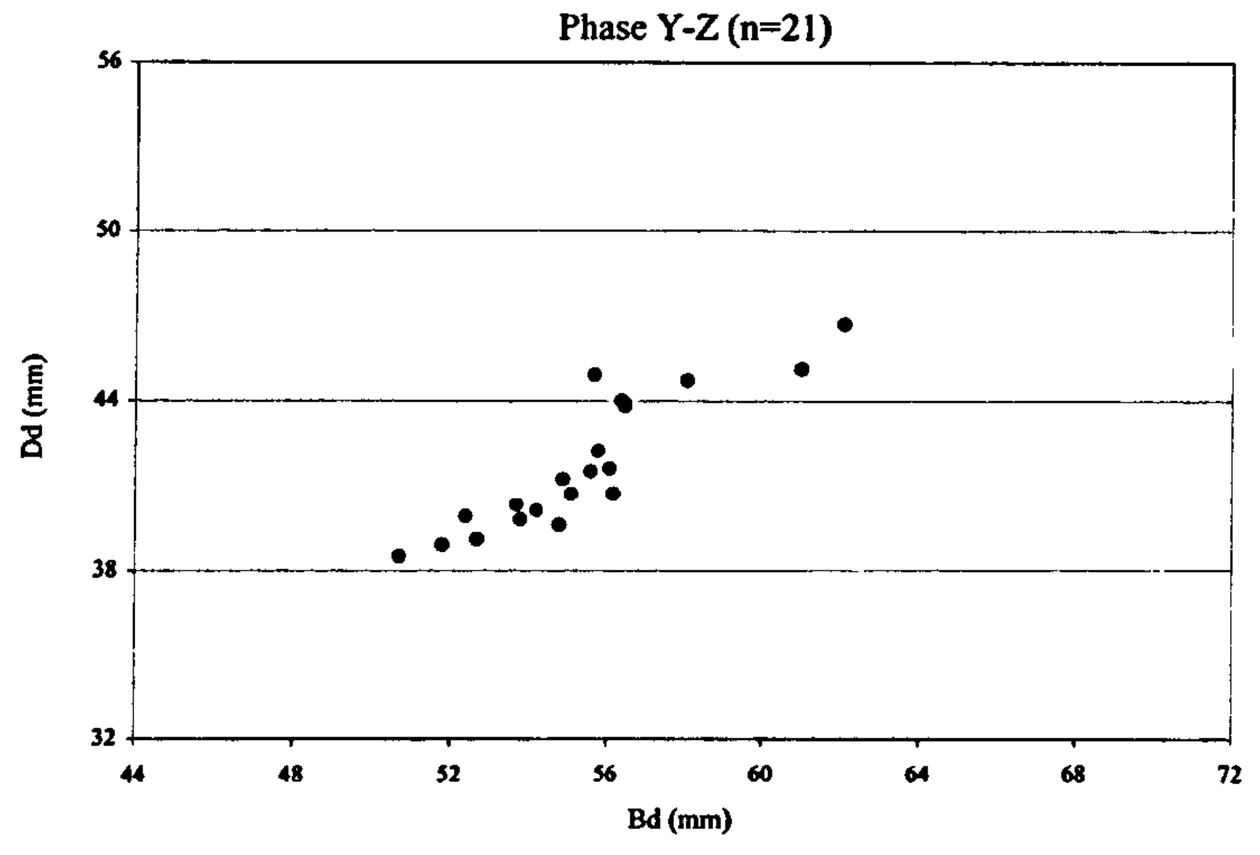


Figure 63. Cattle: Biometry: Breed and/or sex: Distal tibia shape indices (Bd by Dd) by chronological phase

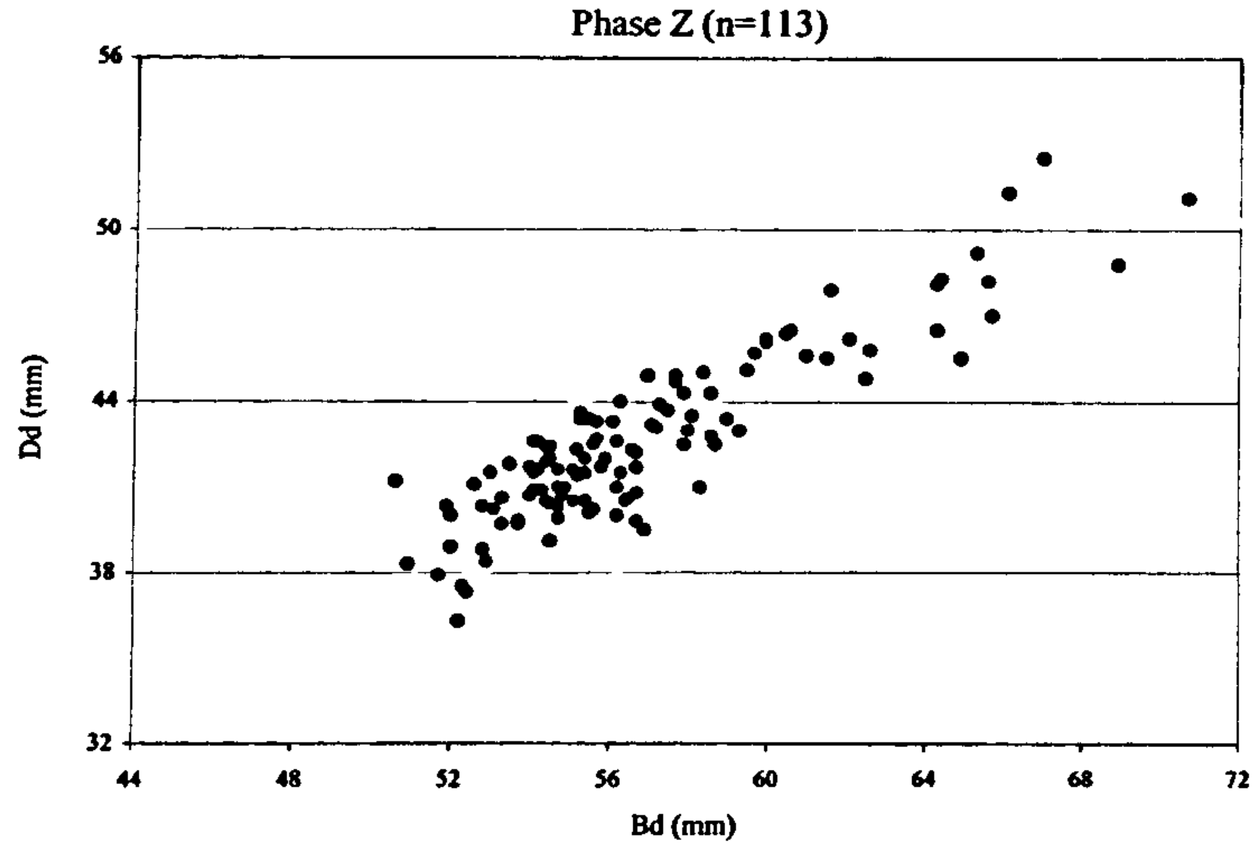
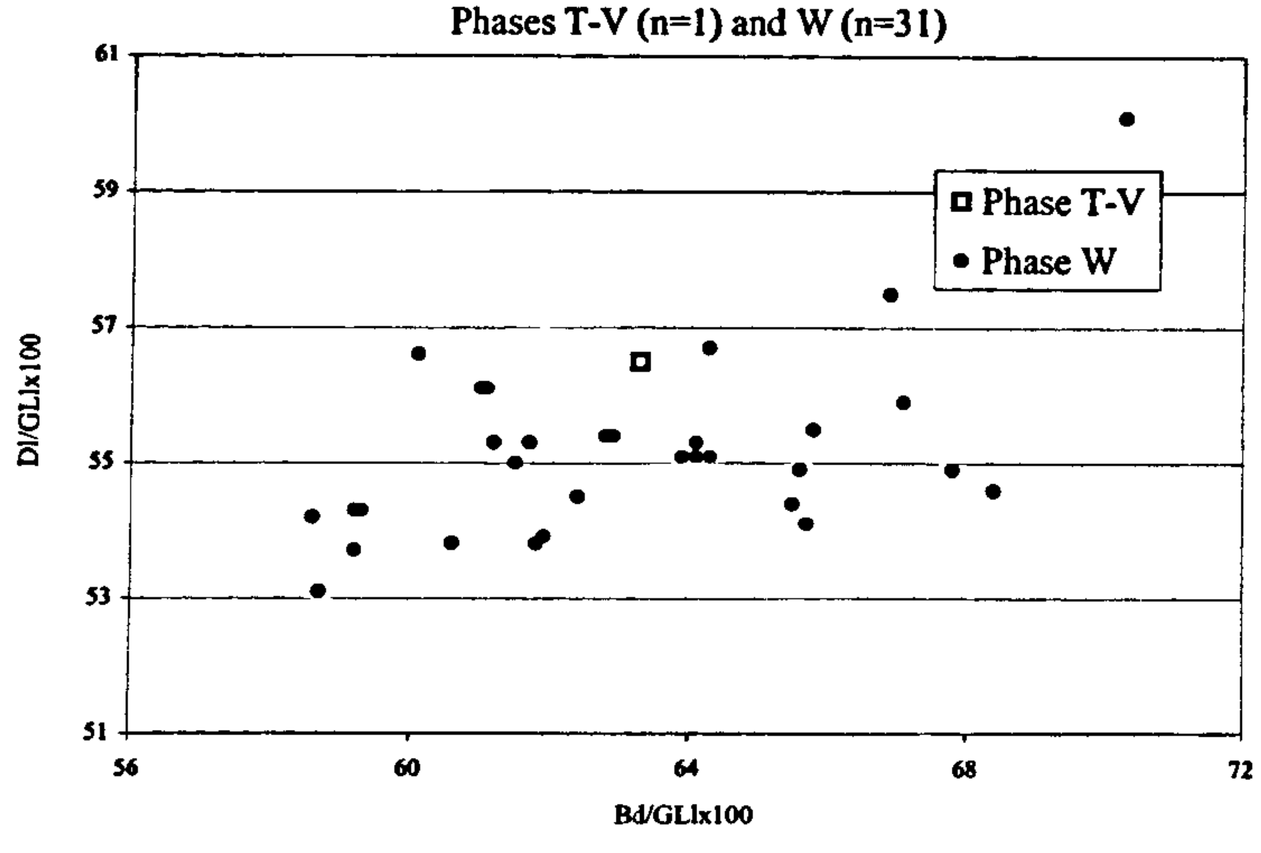
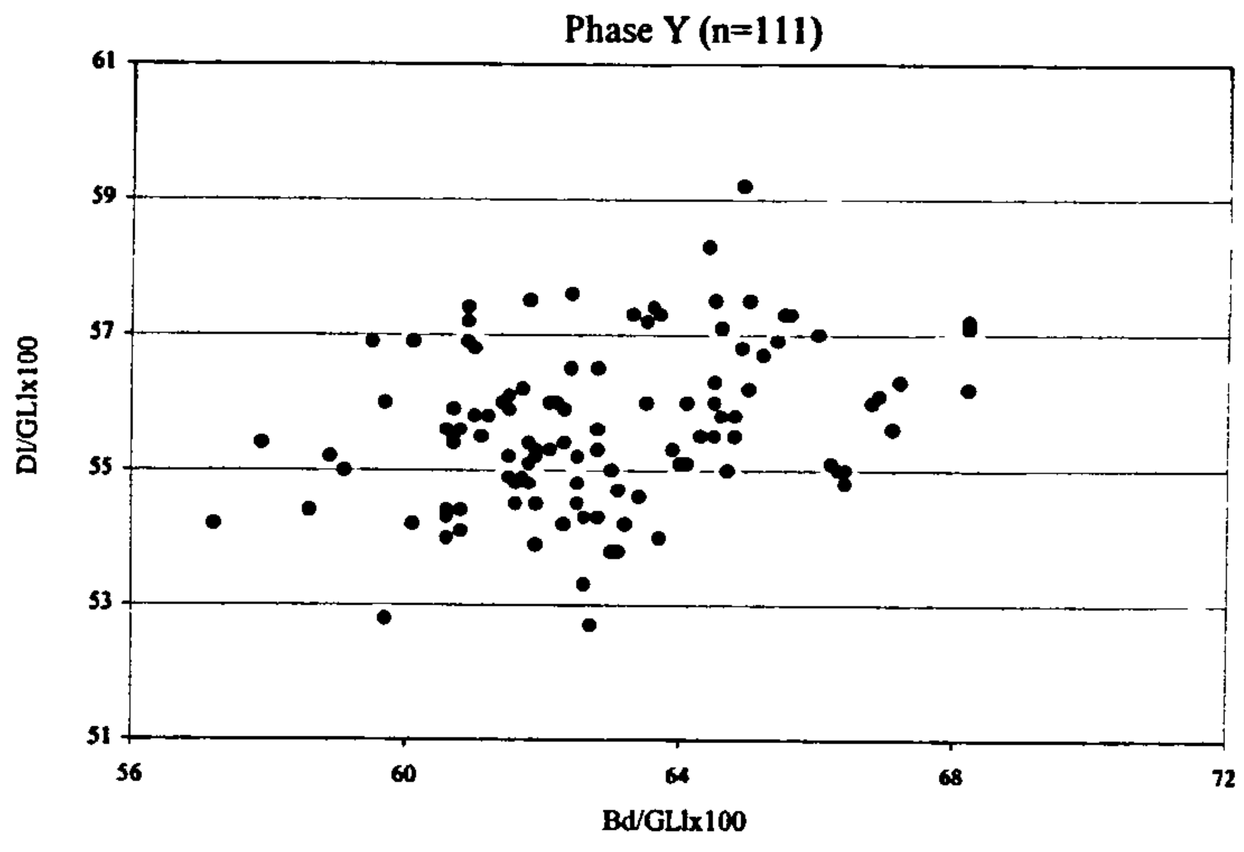
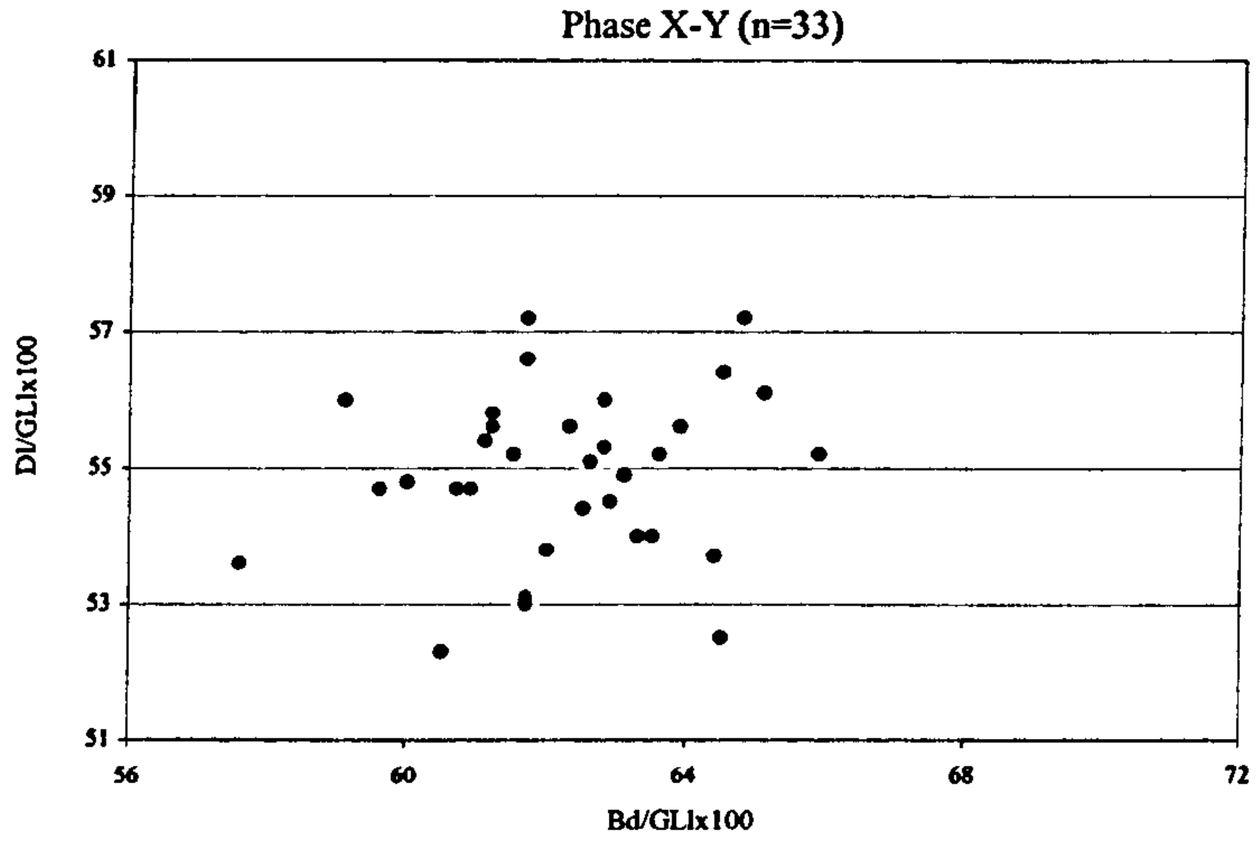


Figure 63 cont. Cattle: Biometry: Breed and/or sex: Distal tibia shape indices (Bd by Dd) by chronological phase







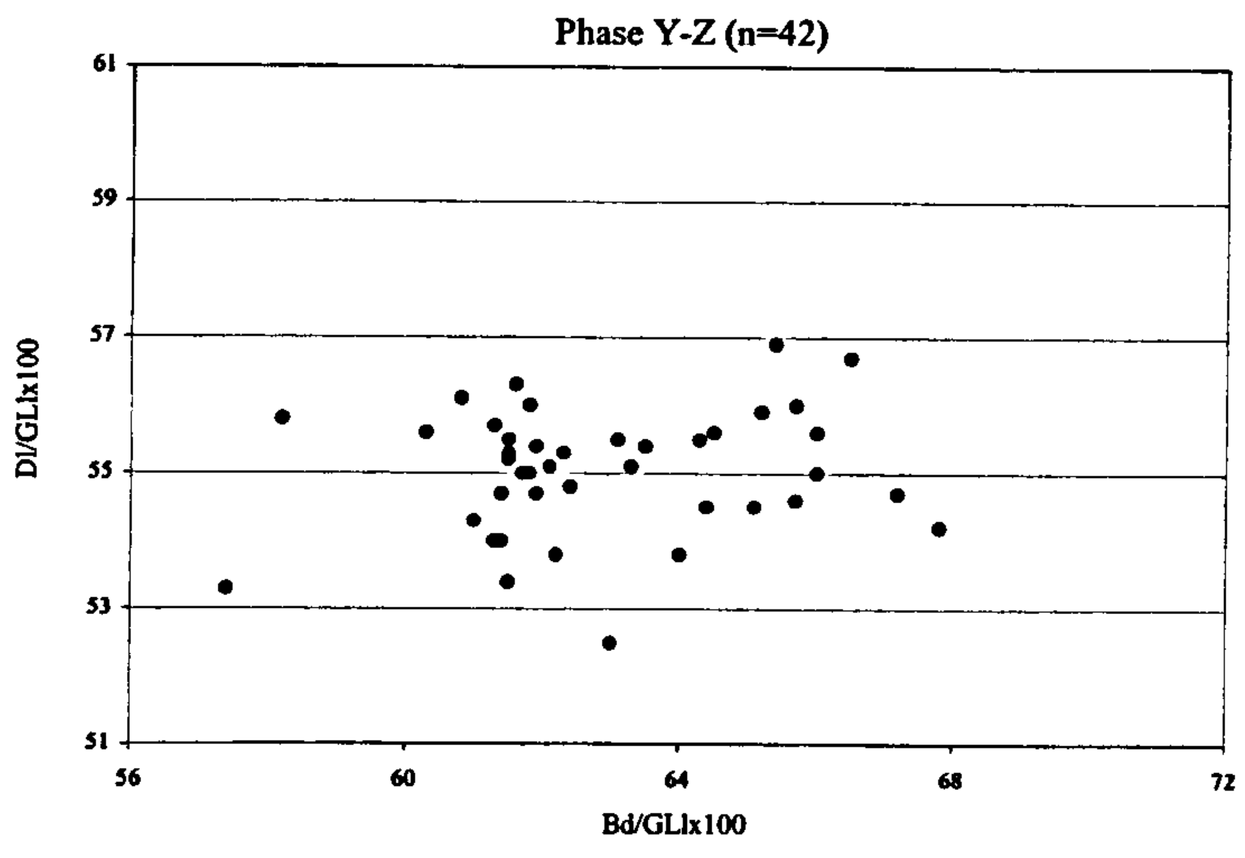


Figure 64. Cattle: Biometry: Breed and/or sex: Astragalus shape indices (Bd/GLlx100 by Dl/GLlx100) by chronological phase

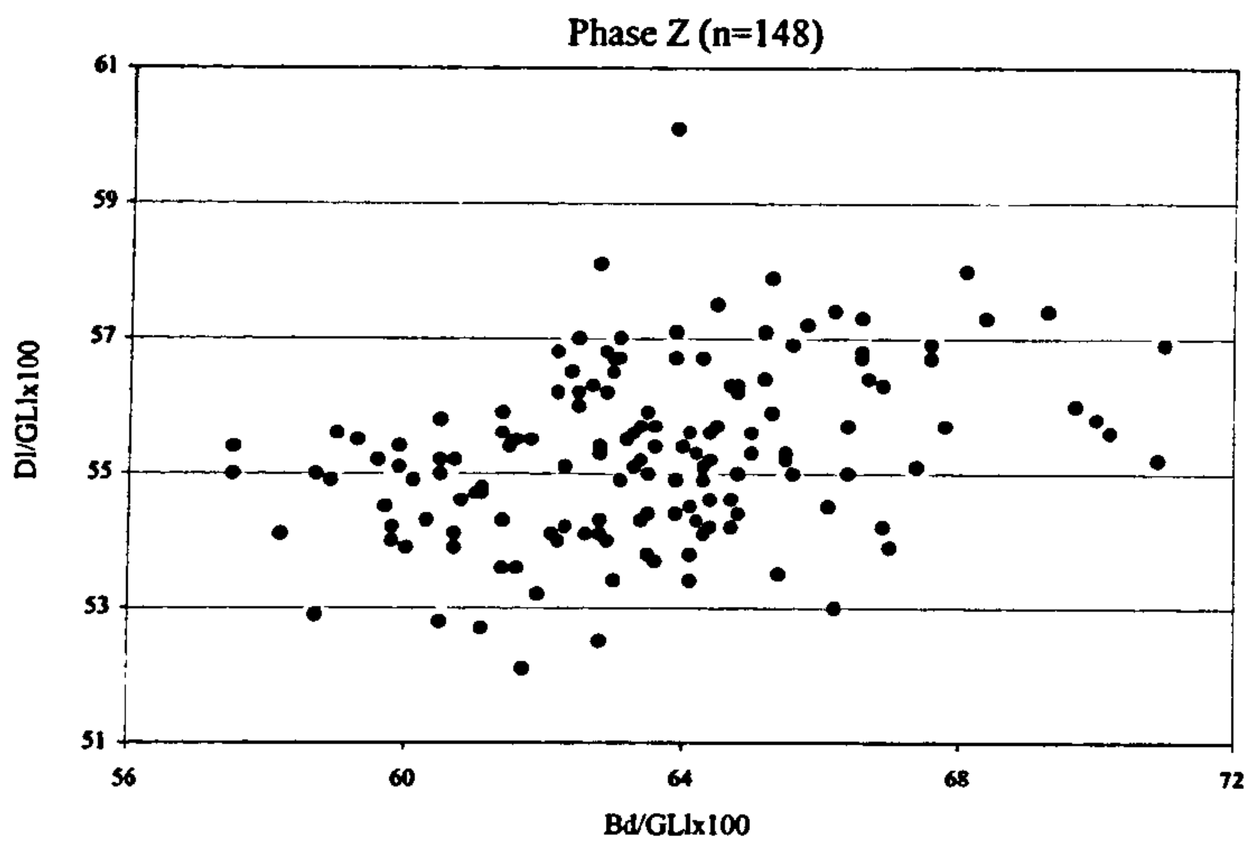


Figure 64 cont. Cattle: Biometry: Breed and/or sex: Astragalus shape indices (Bd/GLlx100 by Dl/GLlx100) by chronological phase

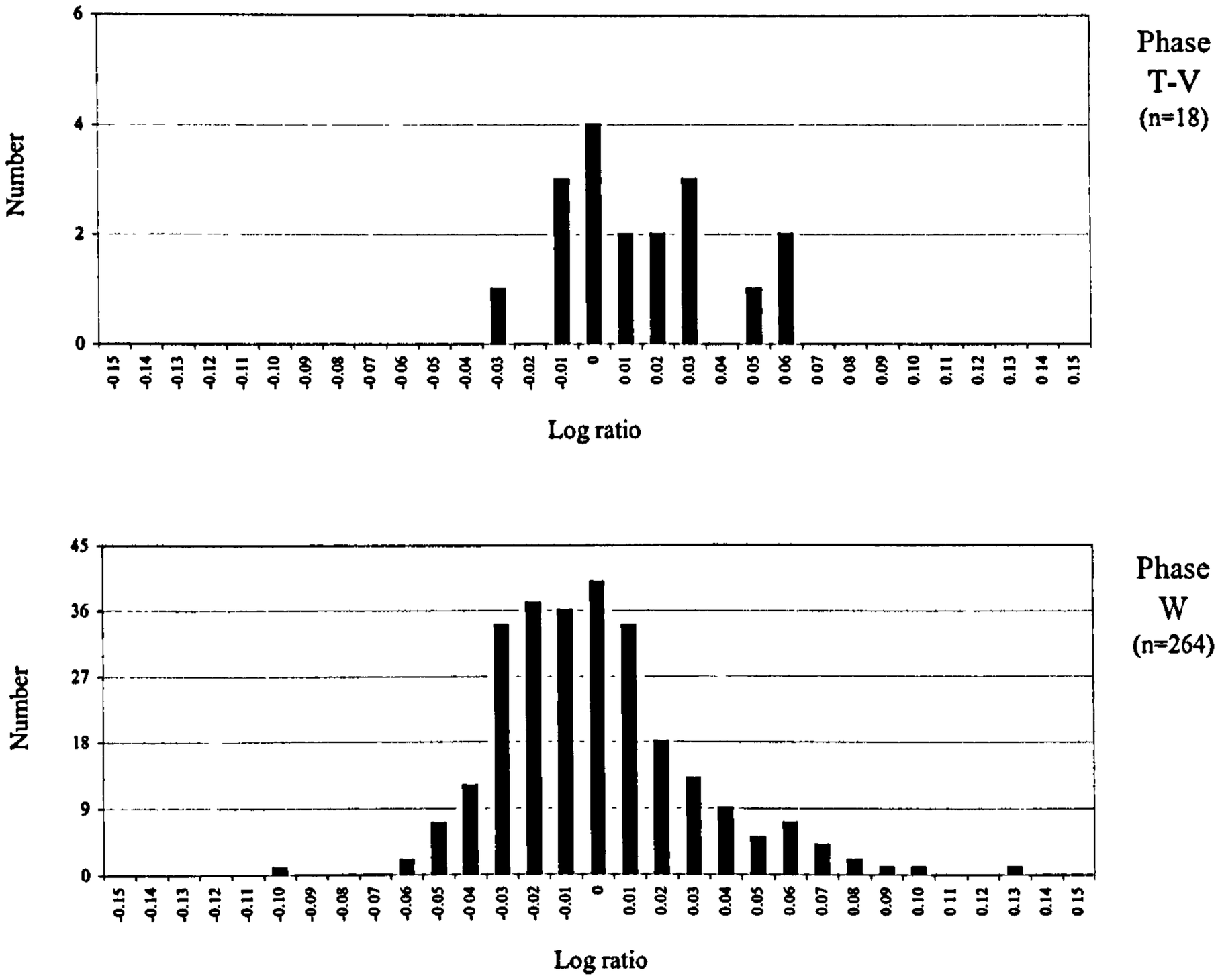


Figure 65. Cattle: Biometry: Log ratios: Inter-site comparison: *Viroconium* widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

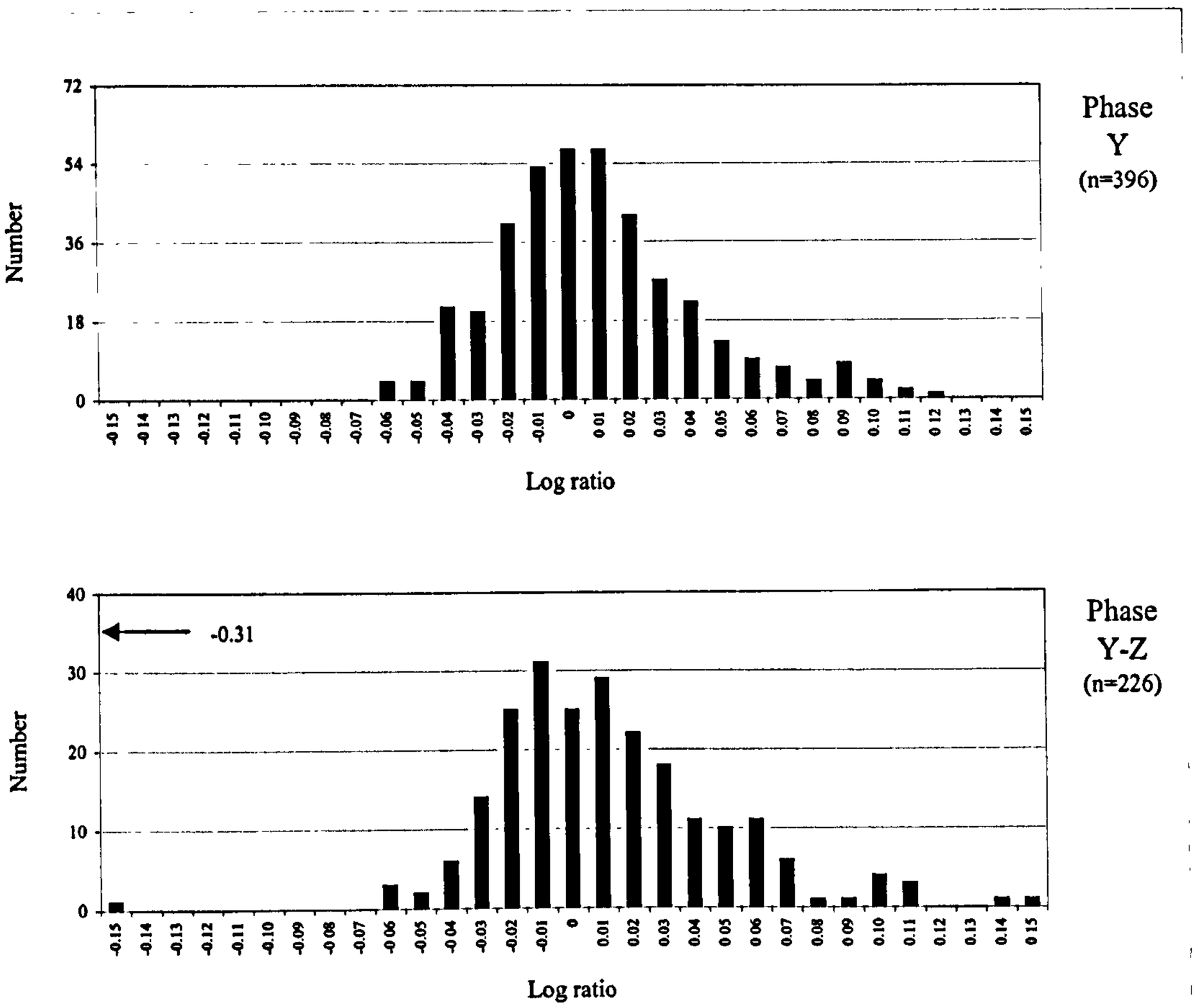


Figure 65 cont. Cattle: Biometry: Log ratios: Inter-site comparison: *Viroconium* widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

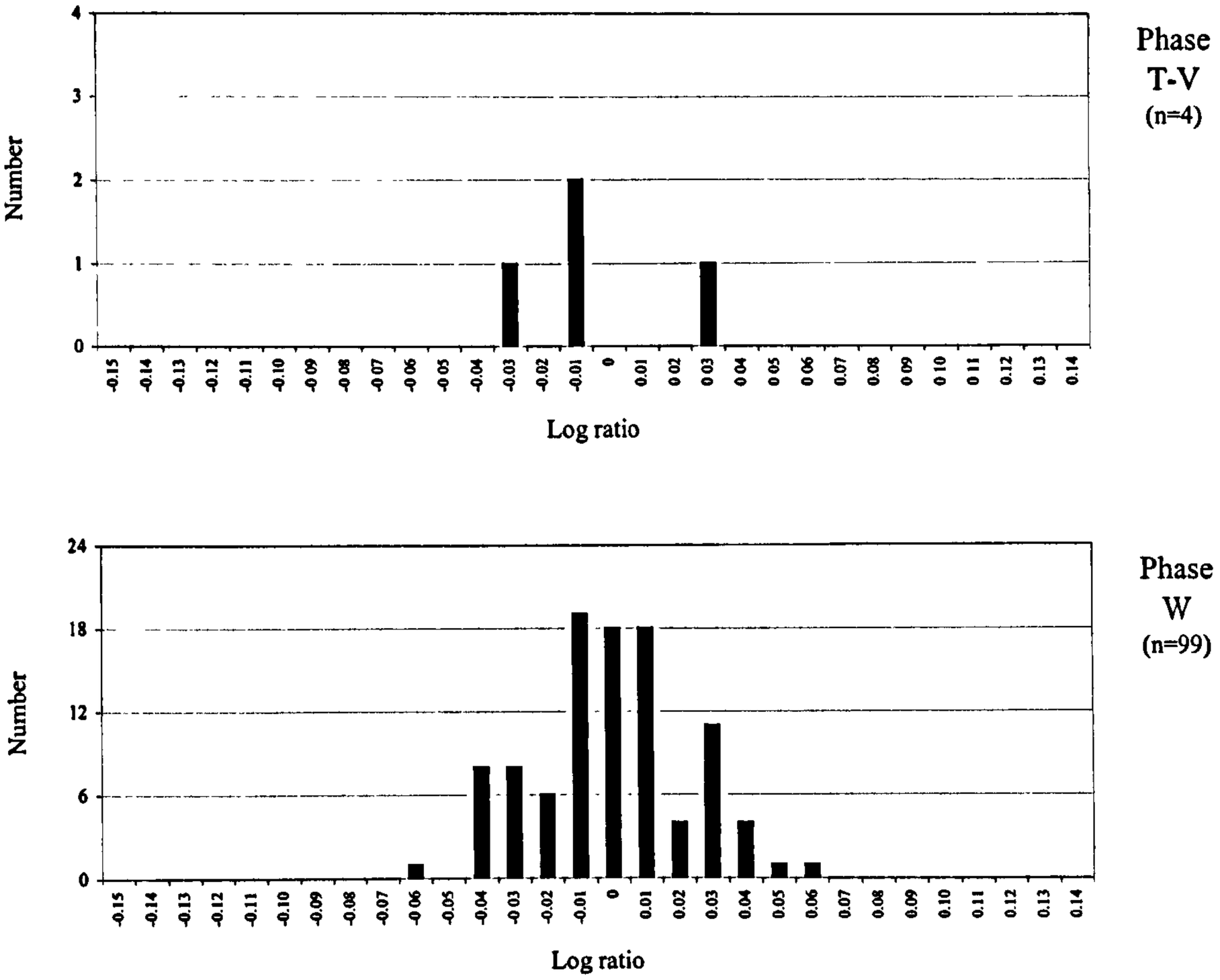


Figure 66. Cattle: Biometry: Log ratios: Inter-site comparison: *Viroconium* lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

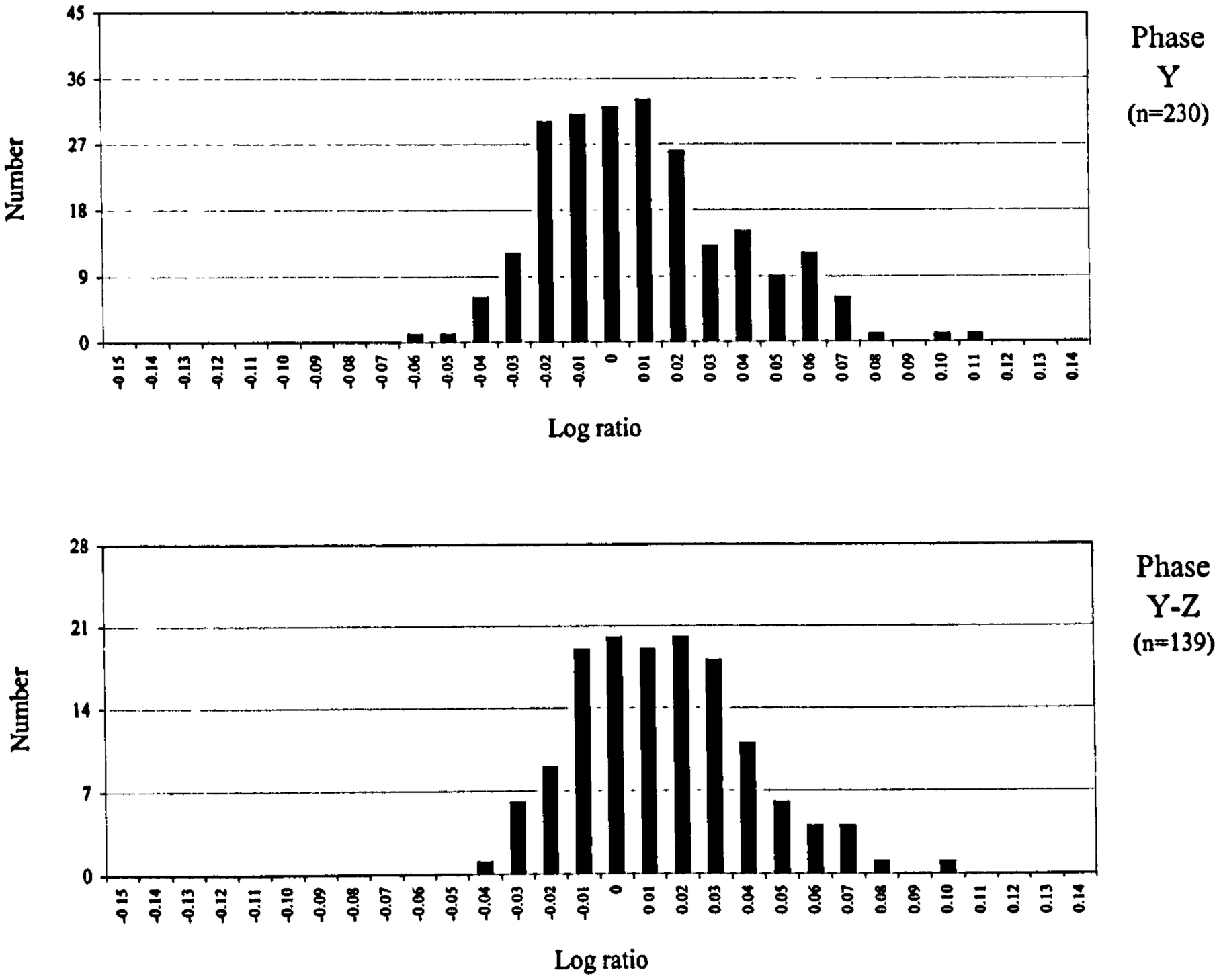


Figure 66 cont. Cattle: Biometry: Log ratios: Inter-site comparison: *Viroconium* lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

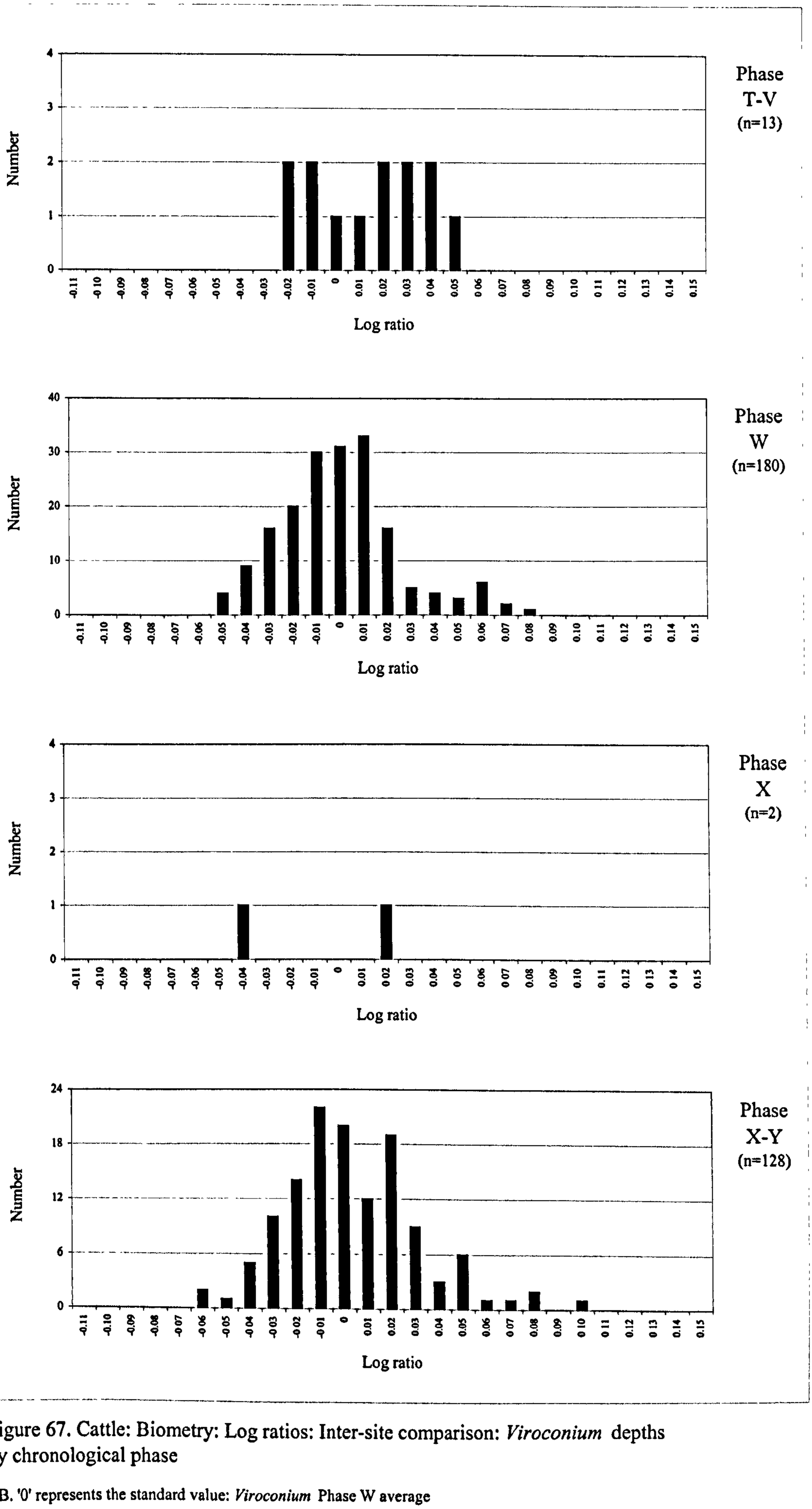


Figure 67. Cattle: Biometry: Log ratios: Inter-site comparison: *Viroconium* depths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

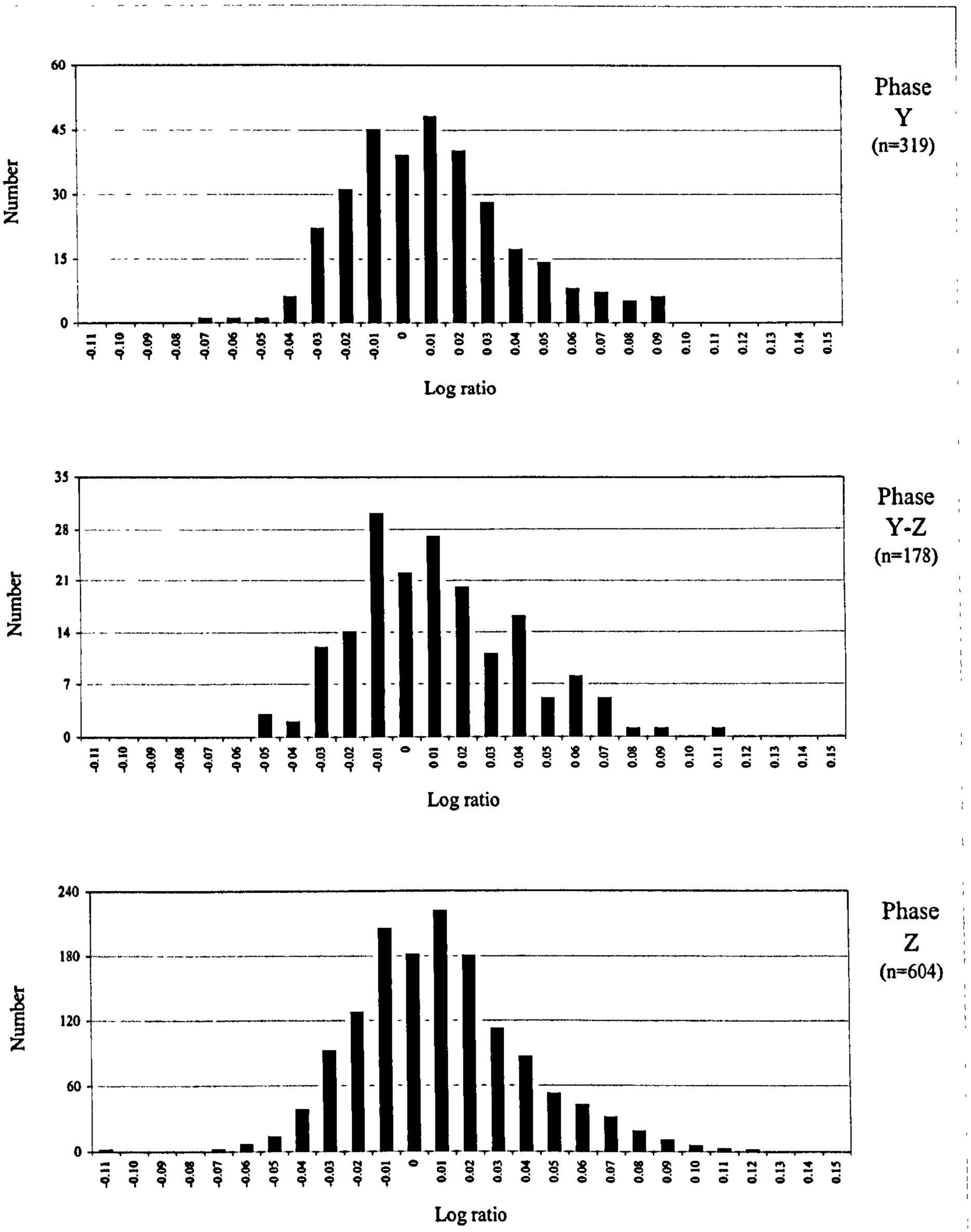


Figure 67 cont. Cattle: Biometry: Log ratios: Inter-site comparison: *Viroconium* depths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

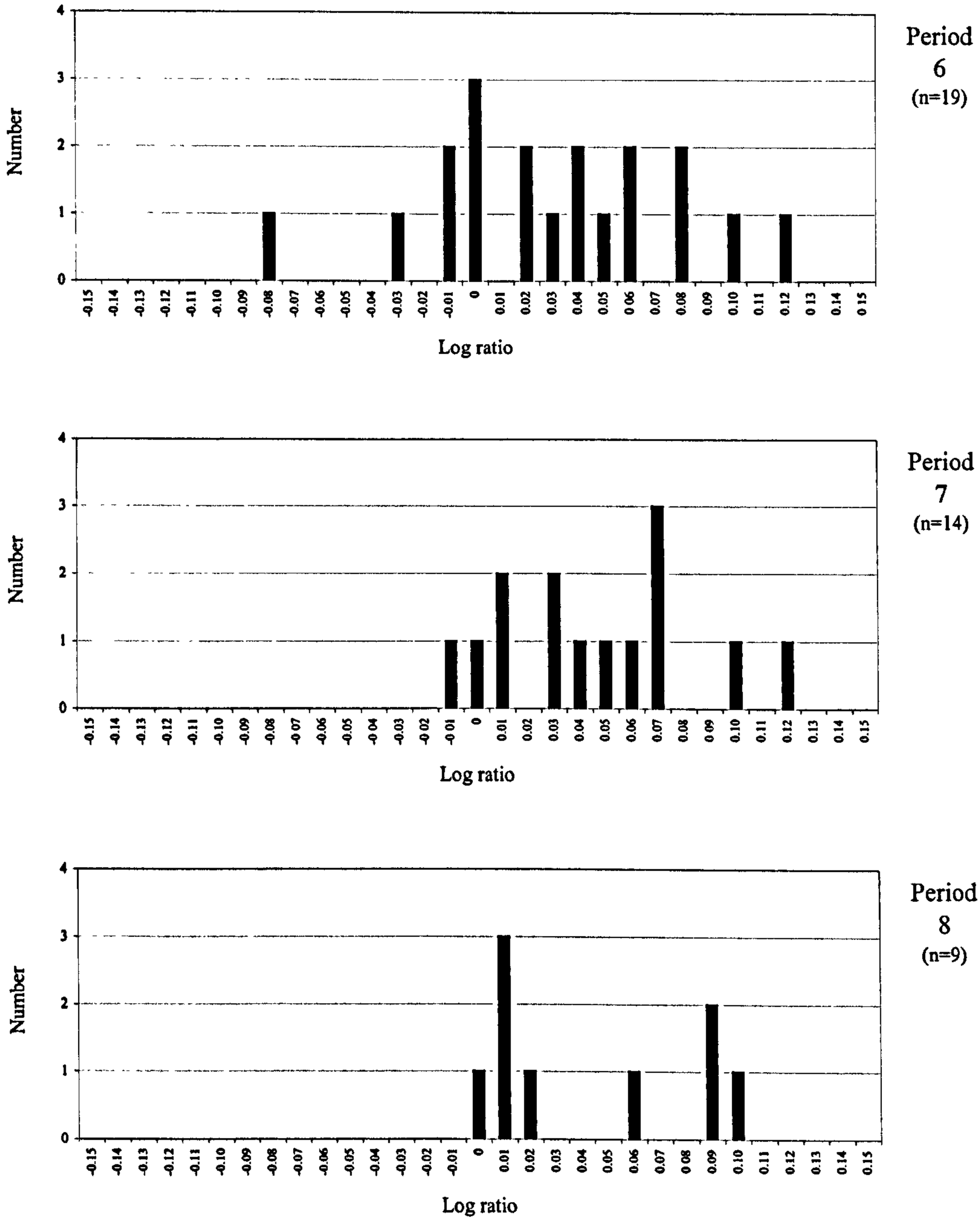


Figure 68. Cattle: Biometry: Log ratios: Inter-site comparison: Colchester widths by chronological period (Luff 1993: 183-197, Microfiche)

NB. '0' represents the standard value: *Viroconium* Phase W average

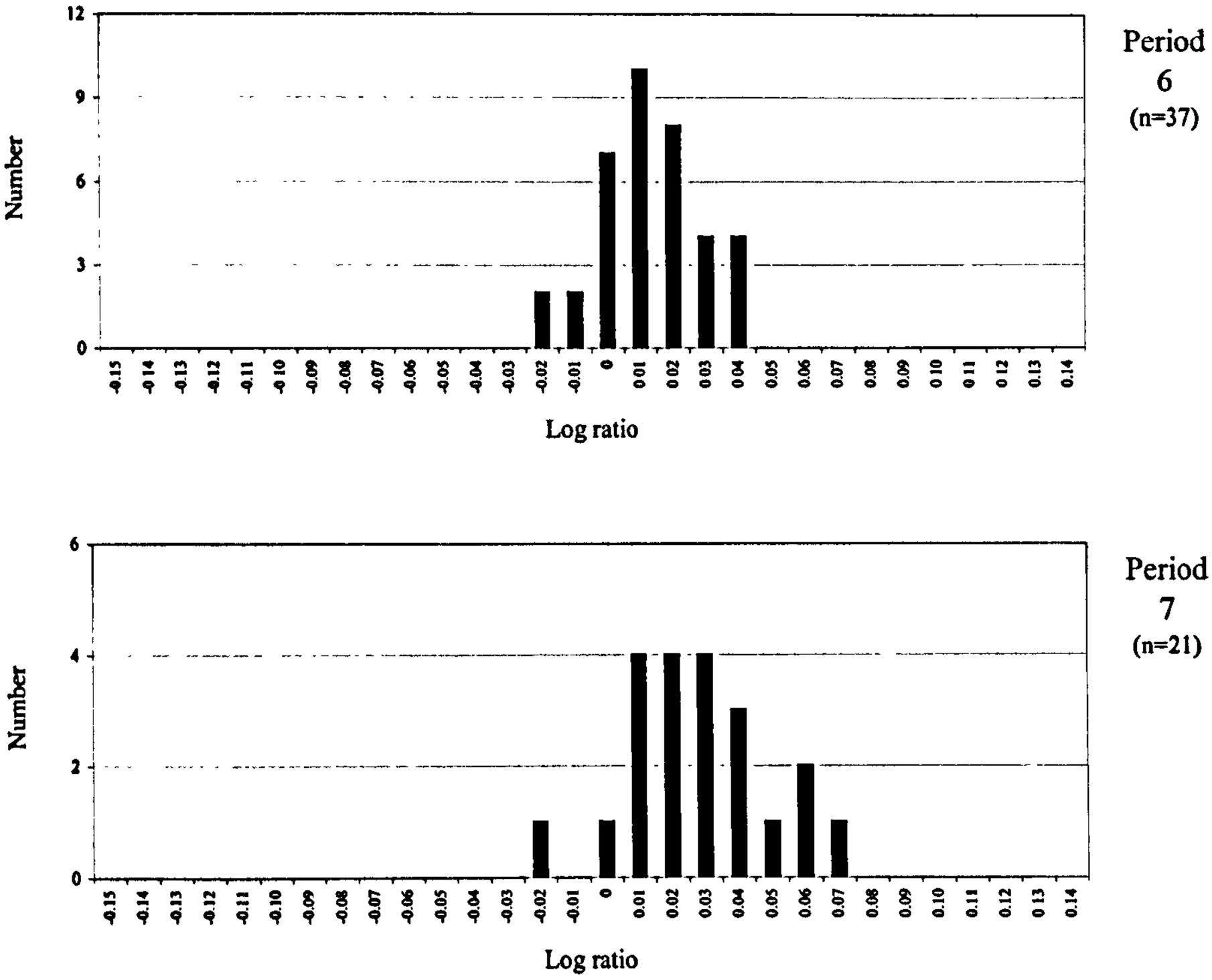


Figure 69. Cattle: Biometry: Log ratios: Inter-site comparison: Colchester lengths by chronological period (Luff 1993: 183-197, Microfiche)

NB. '0' represents the standard value: *Viroconium* Phase W average

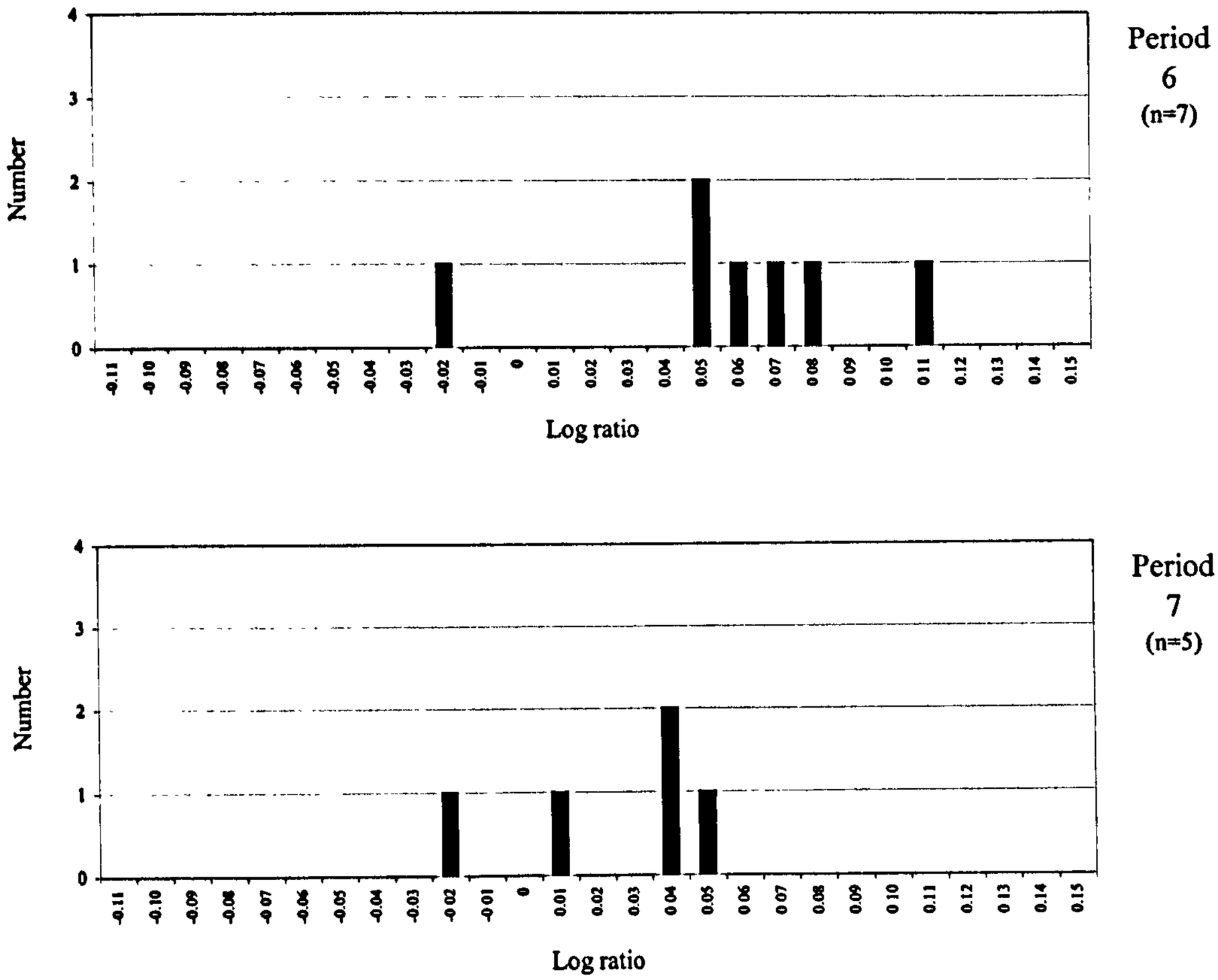


Figure 70. Cattle: Biometry: Log ratios: Inter-site comparison: Colchester depths by chronological period (Luff 1993: 183-197, Microfiche)

NB. '0' represents the standard value: *Viroconium* Phase W average

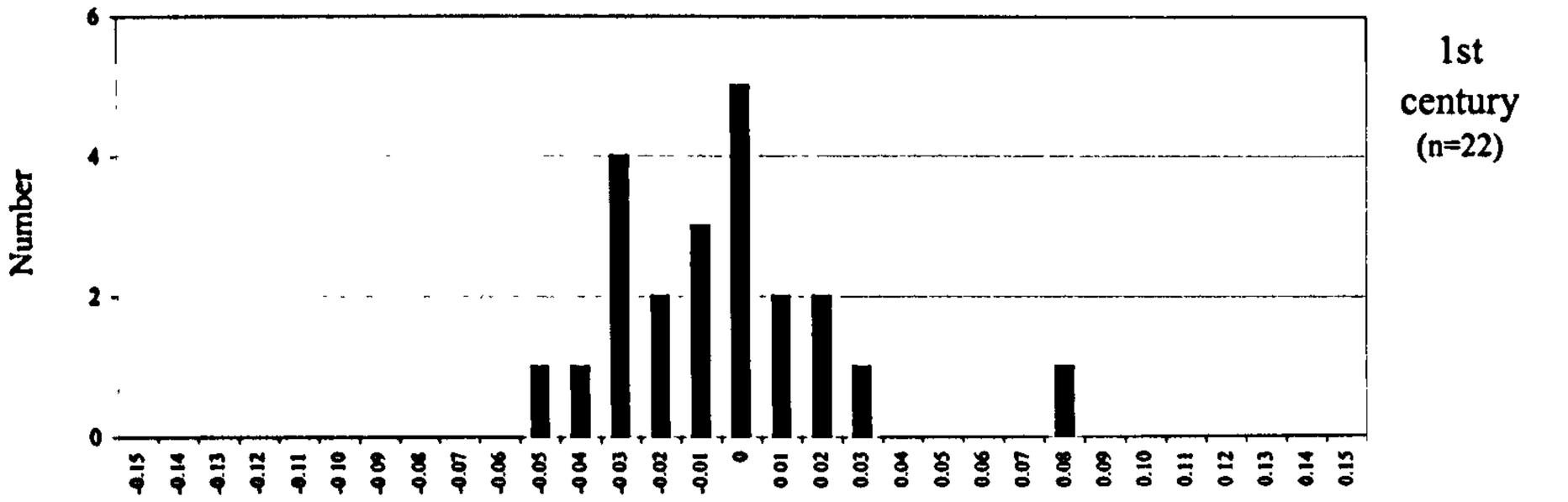


Figure 71. Cattle: Biometry: Log ratios: Inter-site comparison: 1st century Dodder Hill widths (Davis 1988)

NB. '0' represents the standard value: *Viroconium* Phase W average

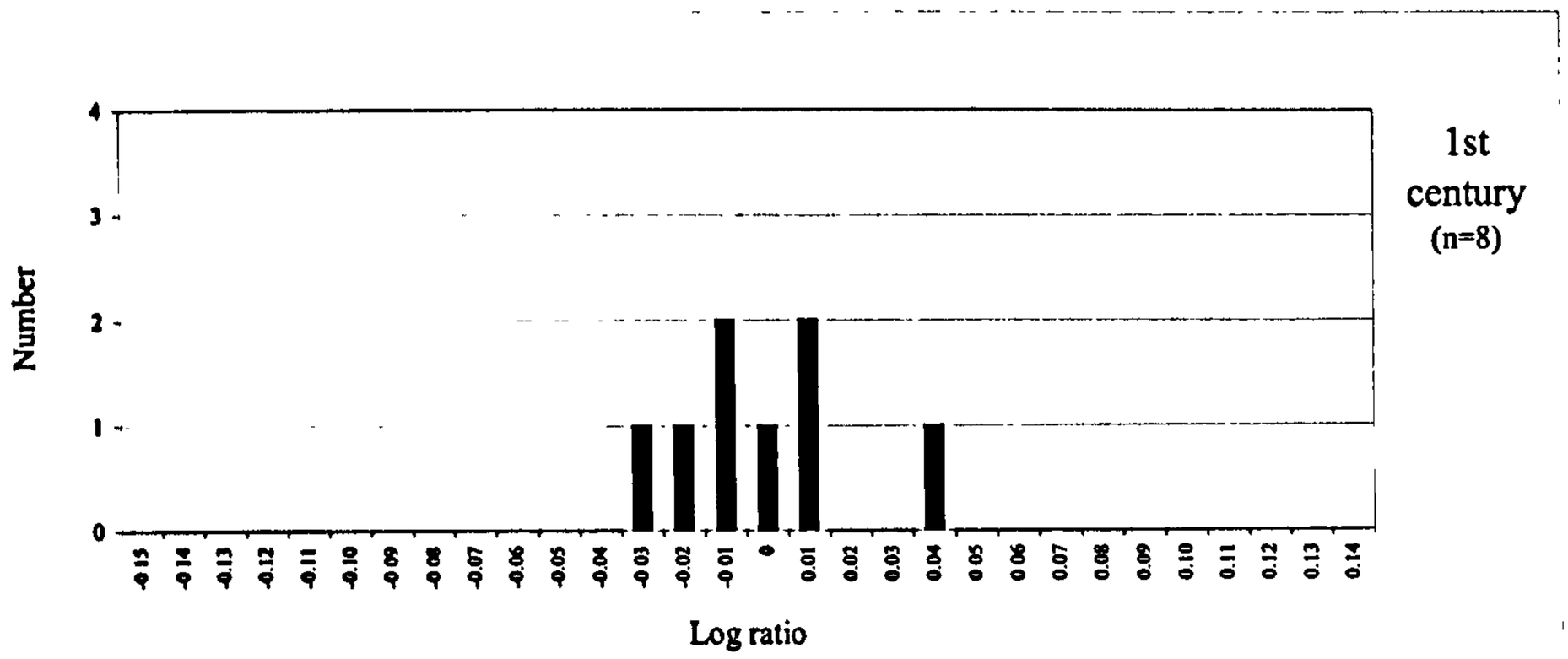


Figure 72. Cattle: Biometry: Log ratios: Inter-site comparison: 1st century Dodder Hill lengths (Davis 1988)

NB. '0' represents the standard value: *Viroconium* Phase W average

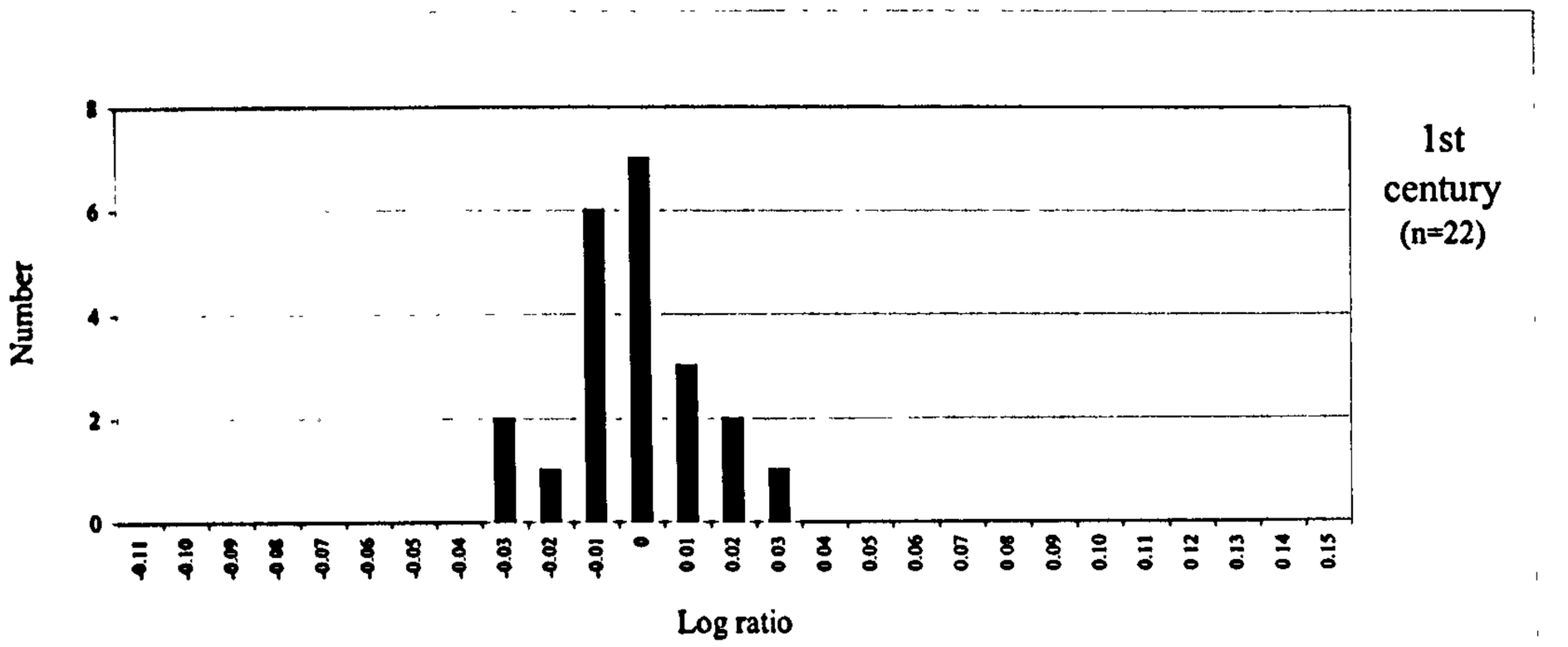


Figure 73. Cattle: Biometry: Log ratios: Inter-site comparison: 1st century Dodder Hill depths (Davis 1988)

NB. '0' represents the standard value: *Viroconium* Phase W average

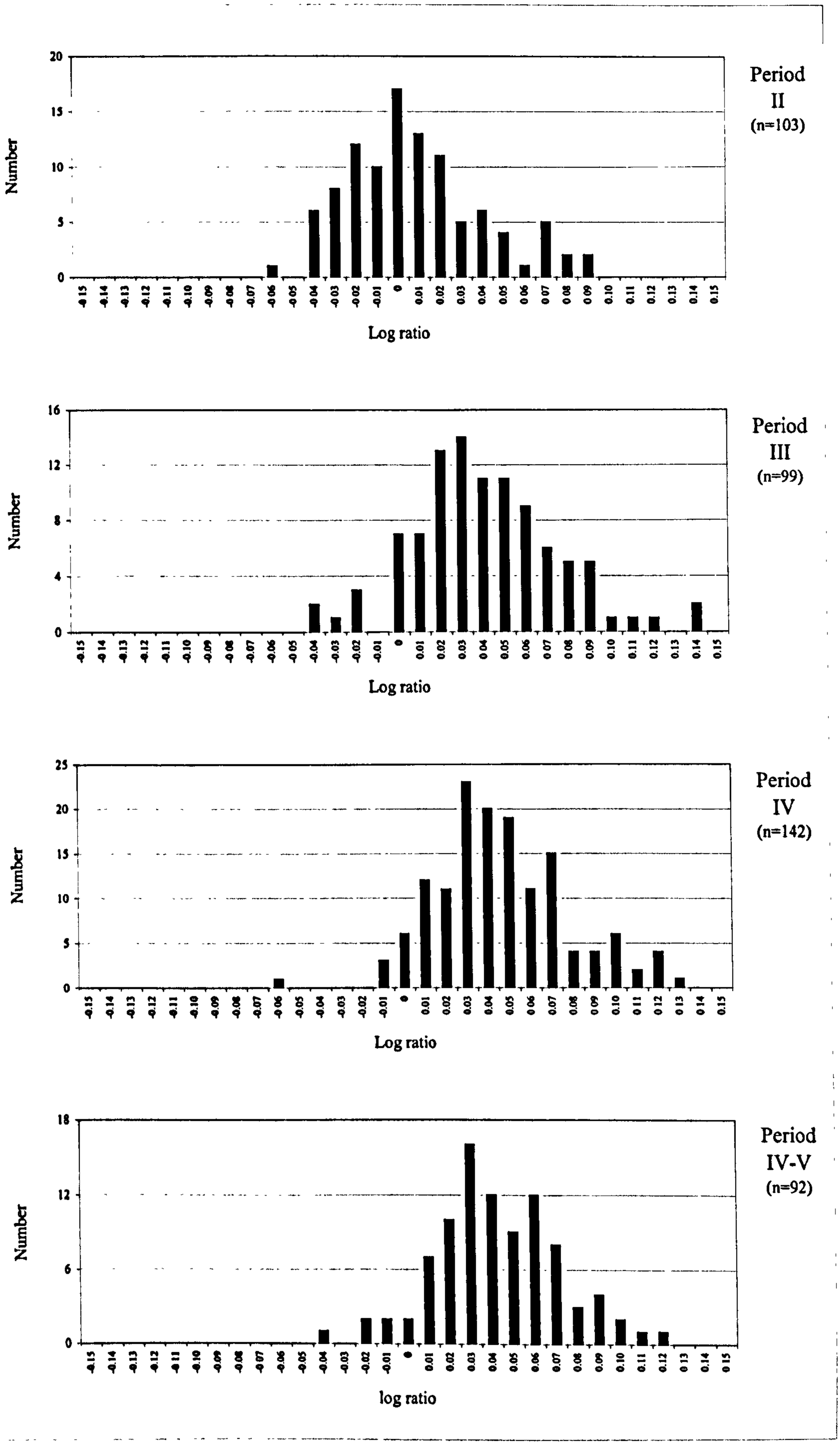


Figure 74. Cattle: Biometry: Log ratios: Inter-site comparison: Elms Farm widths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

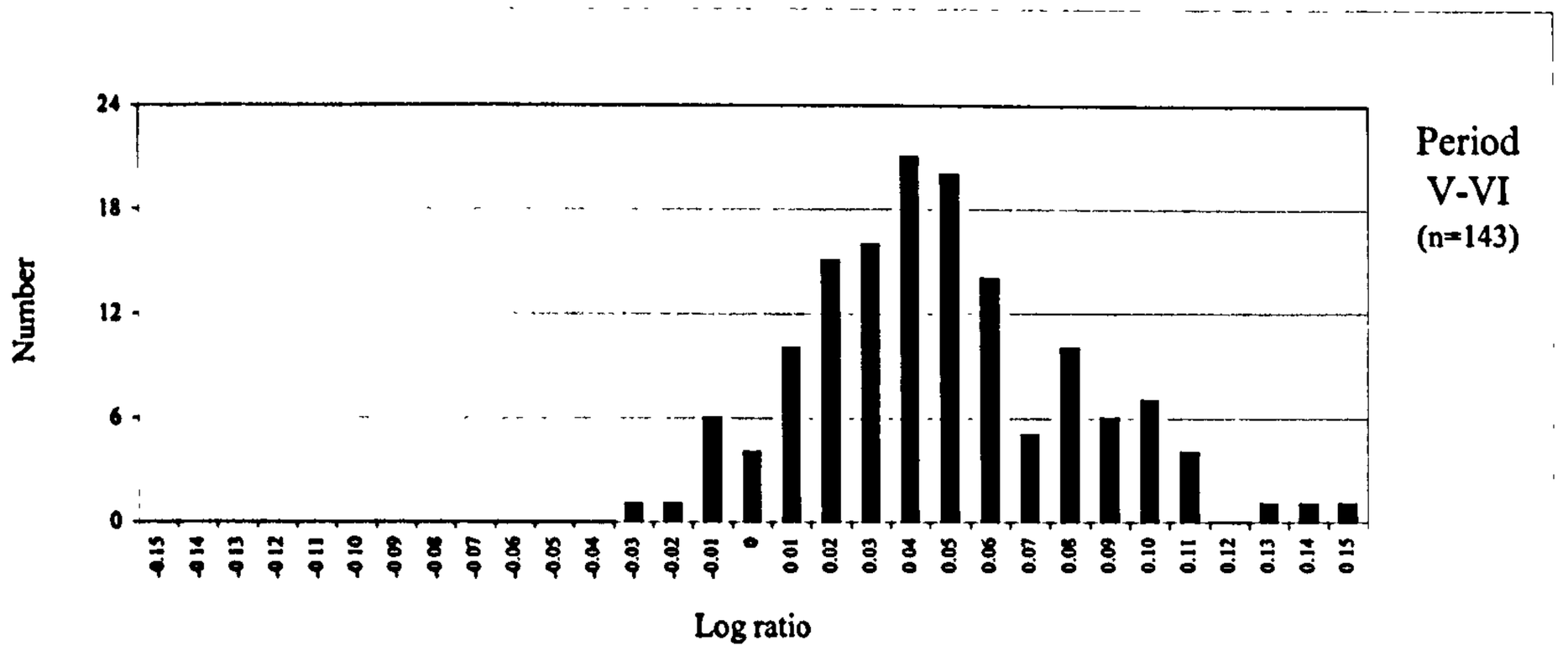


Figure 74 cont. Cattle: Biometry: Log ratios: Inter-site comparison: Elms Farm widths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

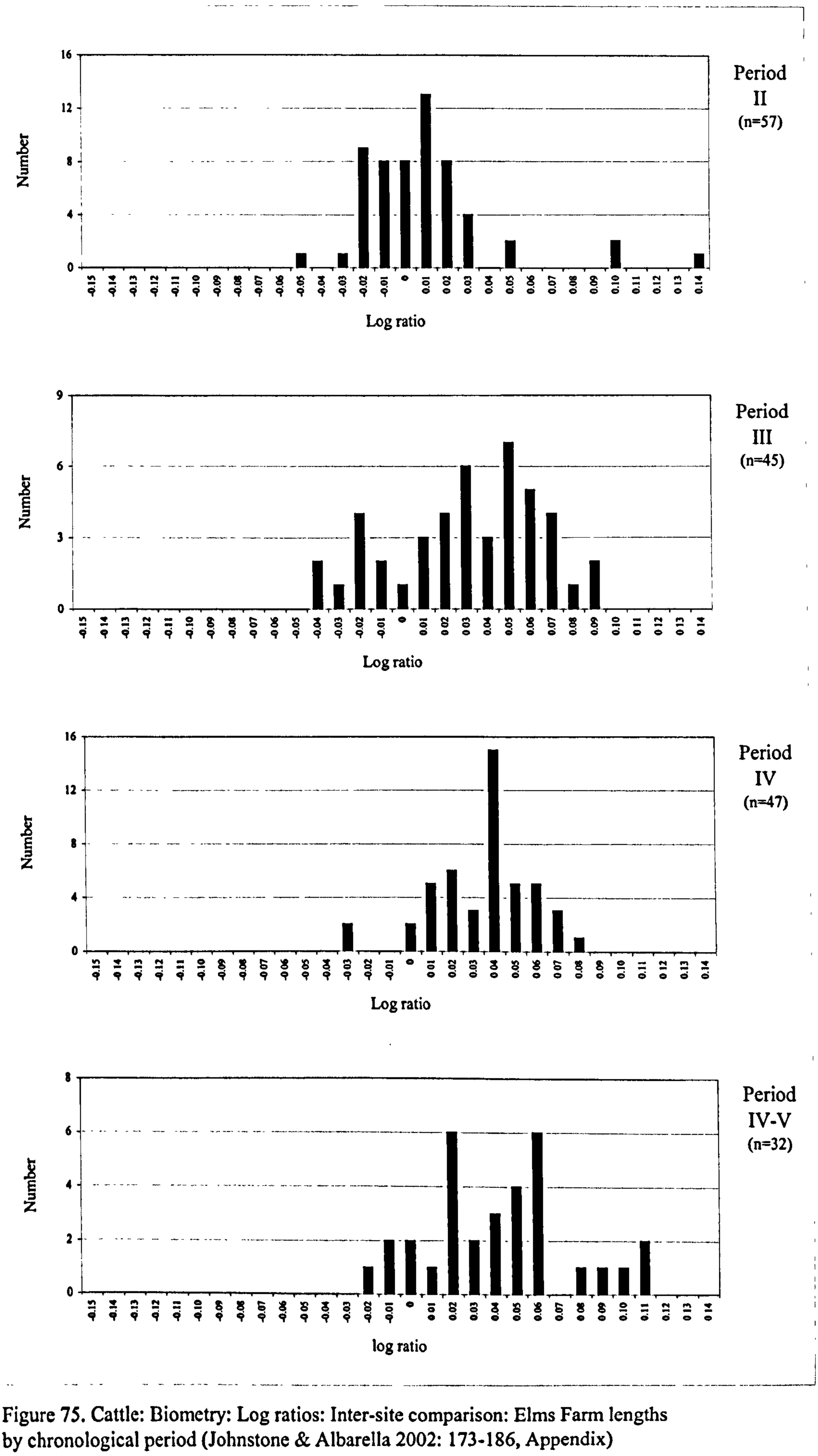


Figure 75. Cattle: Biometry: Log ratios: Inter-site comparison: Elms Farm lengths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

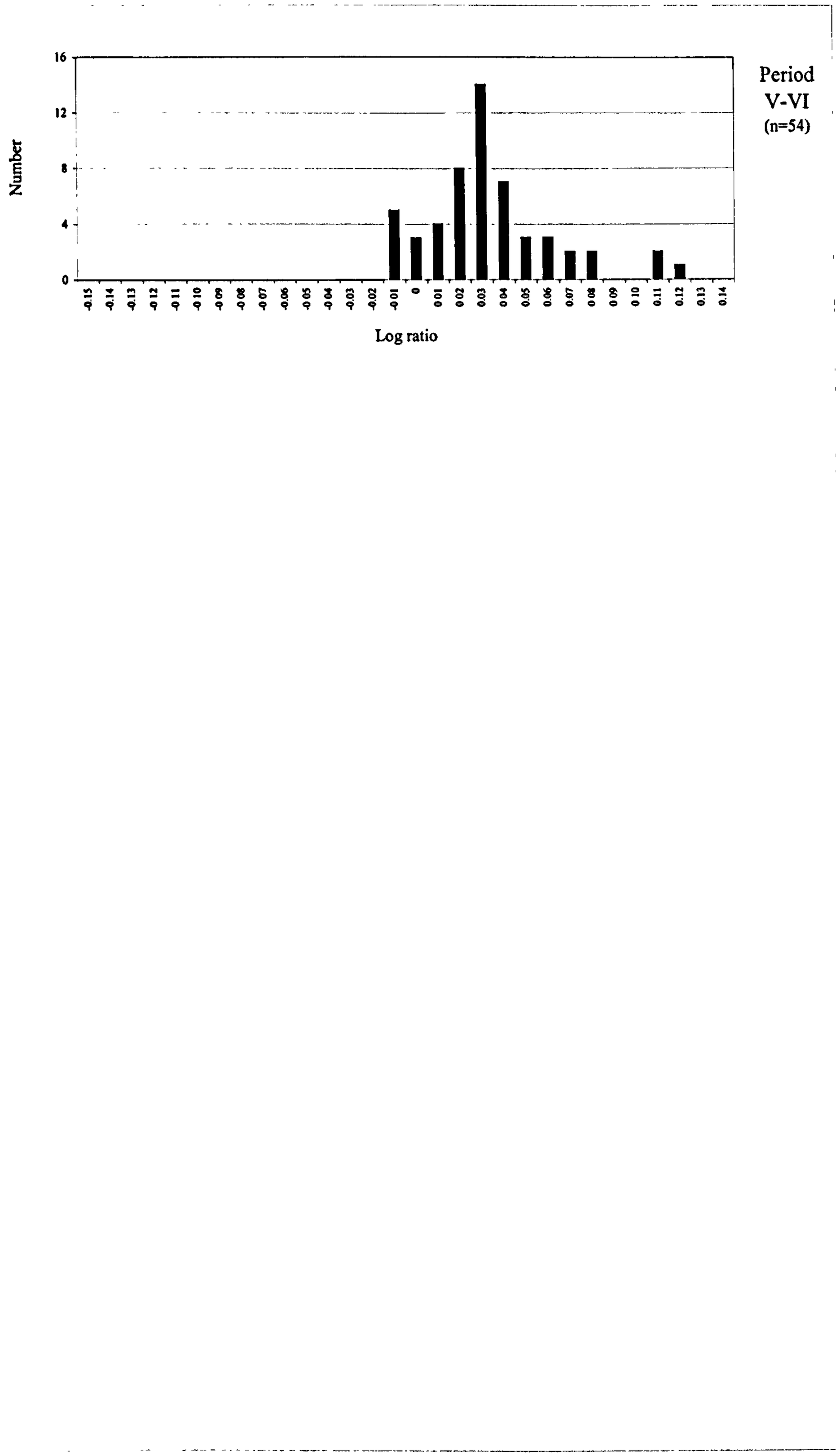


Figure 75 cont. Cattle: Biometry: Log ratios: Inter-site comparison: Elms Farm lengths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

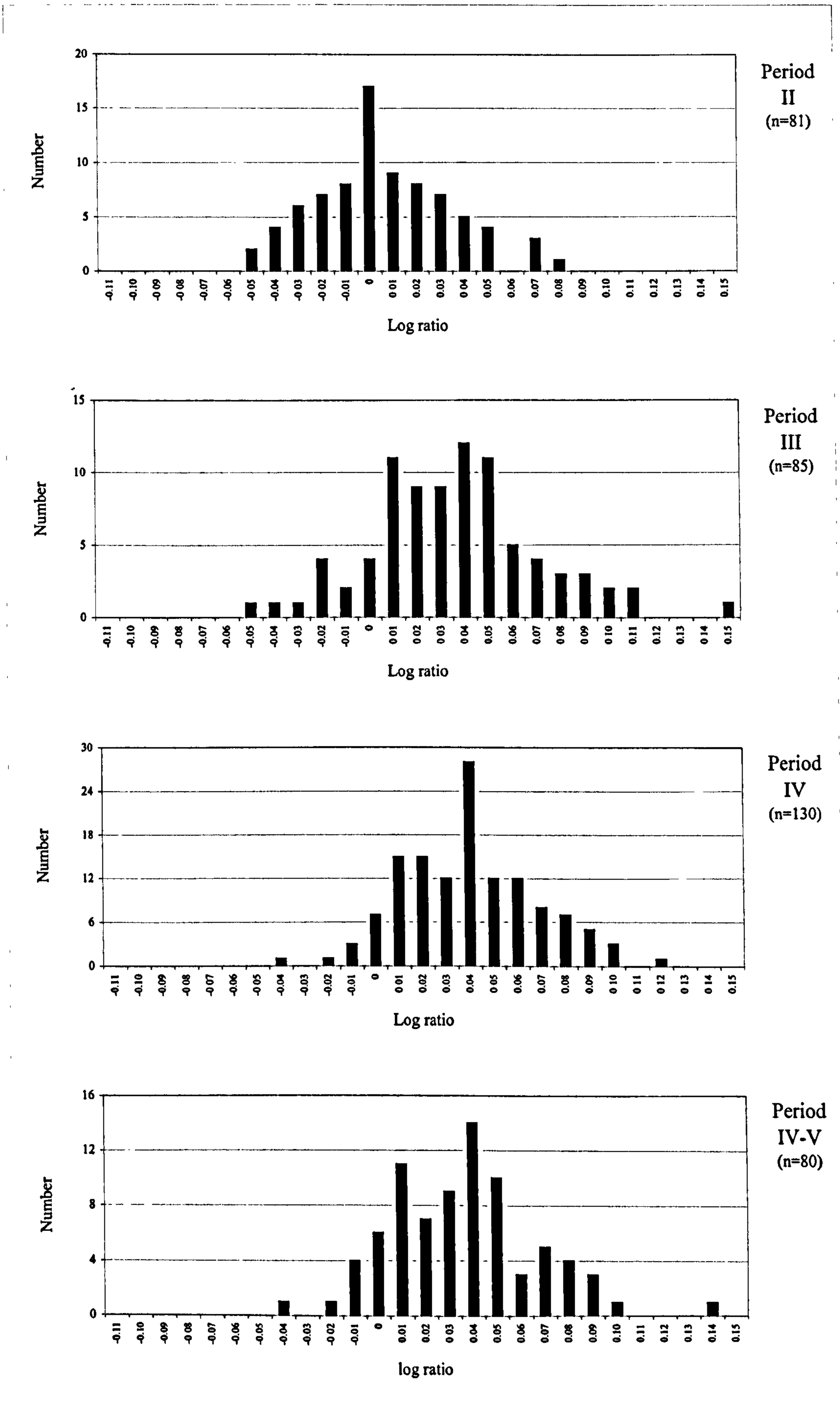


Figure 76. Cattle: Biometry: Log ratios: Inter-site comparison: Elms Farm depths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

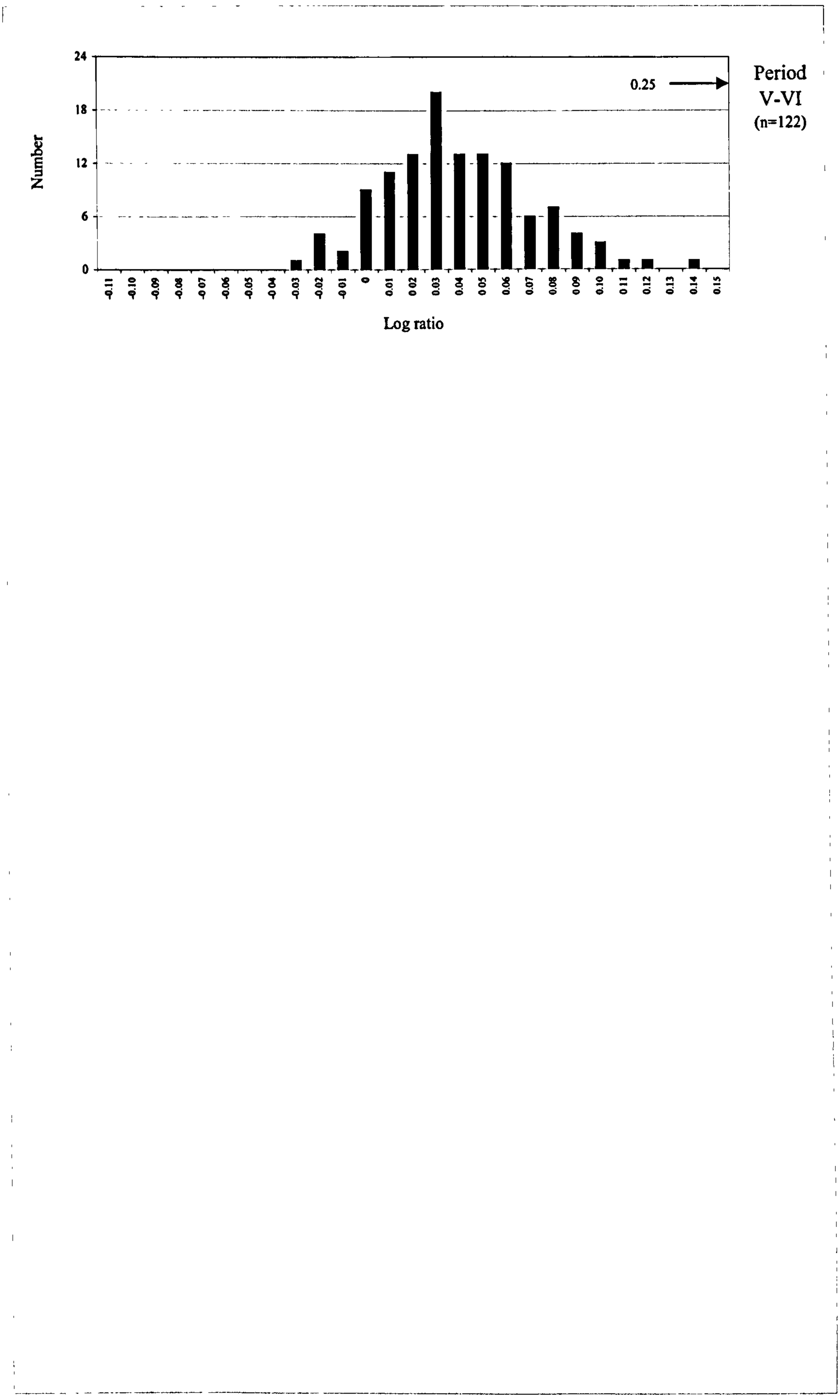


Figure 76 cont. Cattle: Biometry: Log ratios: Inter-site comparison: Elms Farm depths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

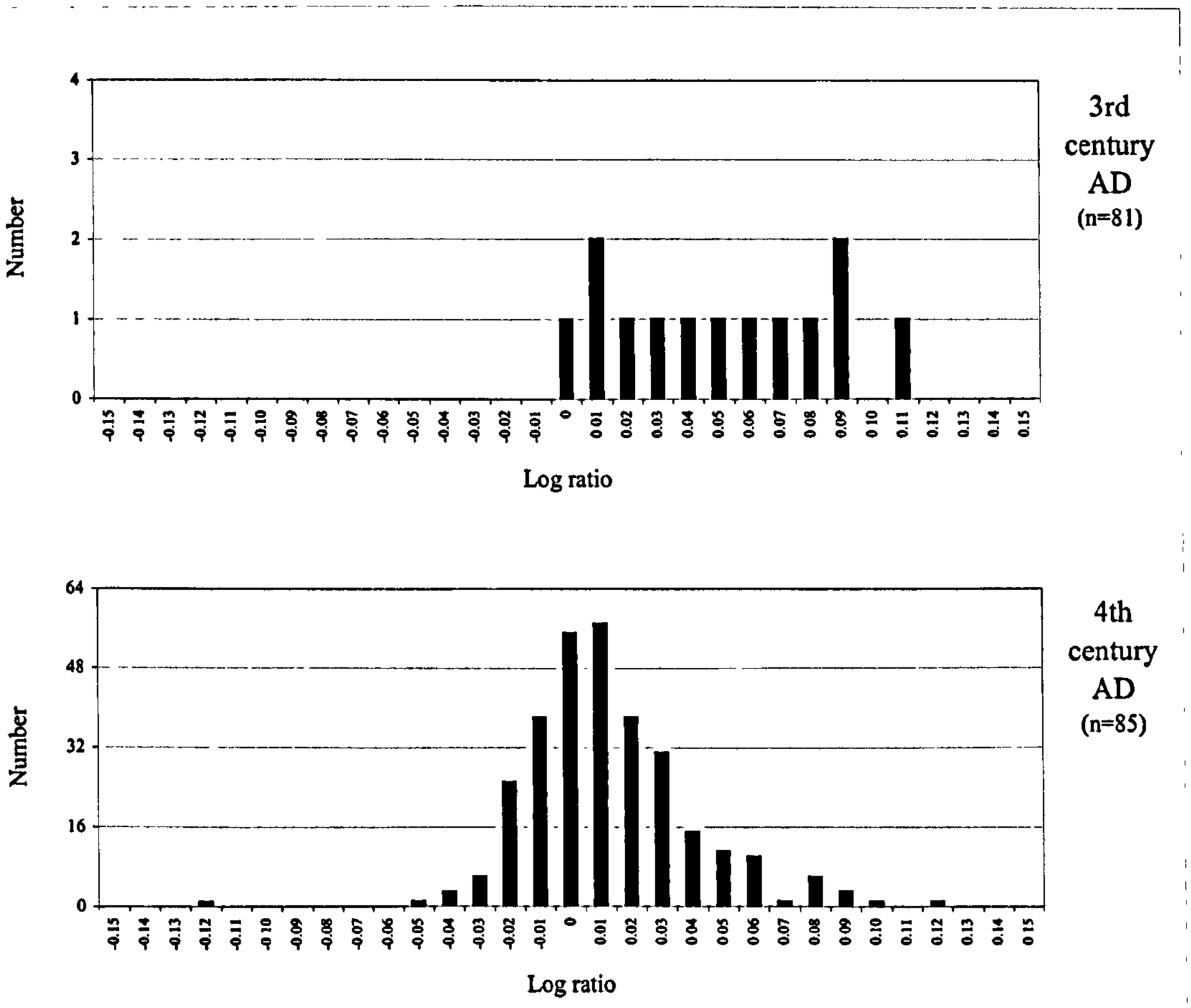


Figure 77. Cattle: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln widths (Dobney *et al*. 1996: 148-175, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

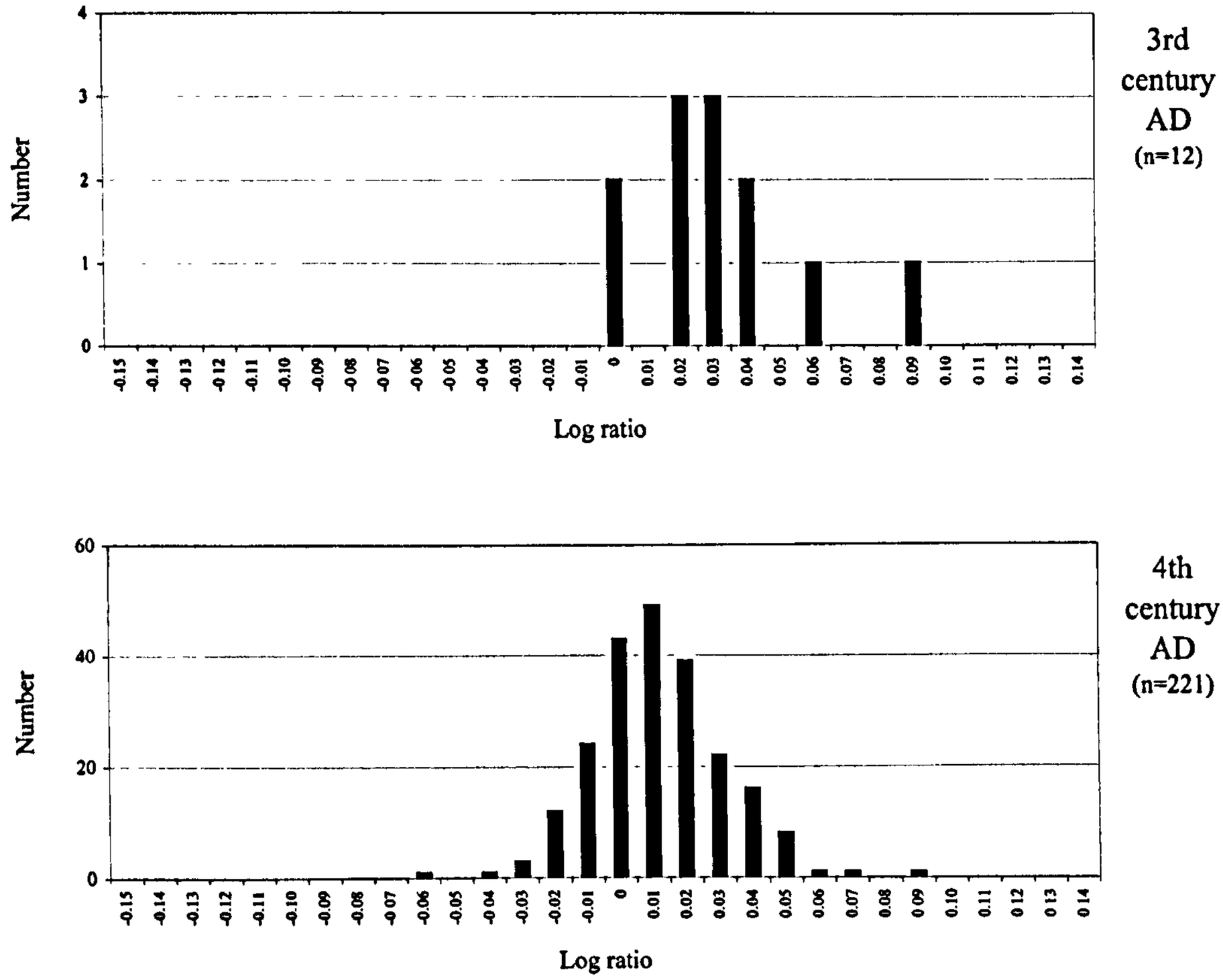


Figure 78. Cattle: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln lengths (Dobney *et al*. 1996: 148-175, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

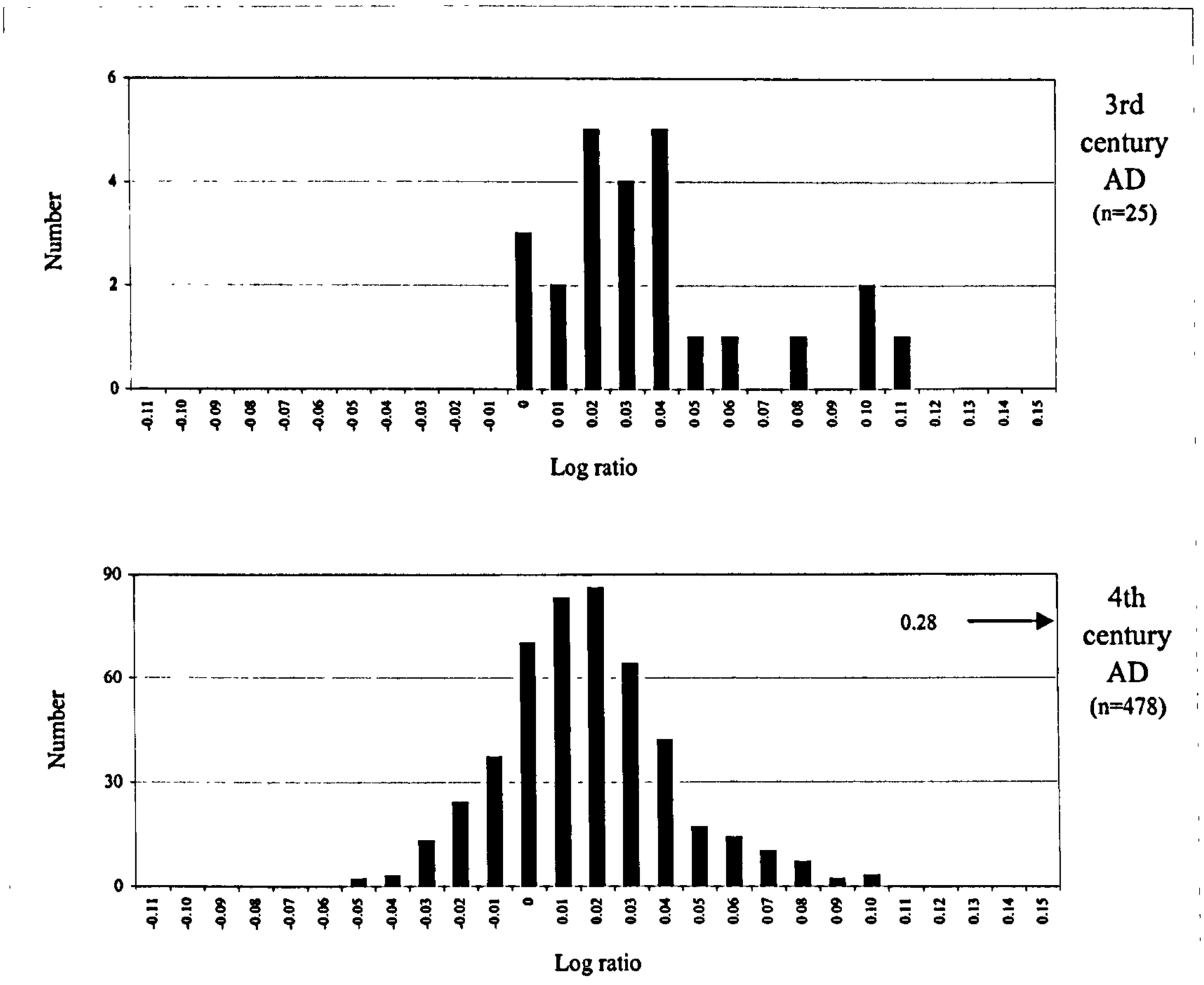


Figure 79. Cattle: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln depths (Dobney *et al*. 1996: 148-175, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

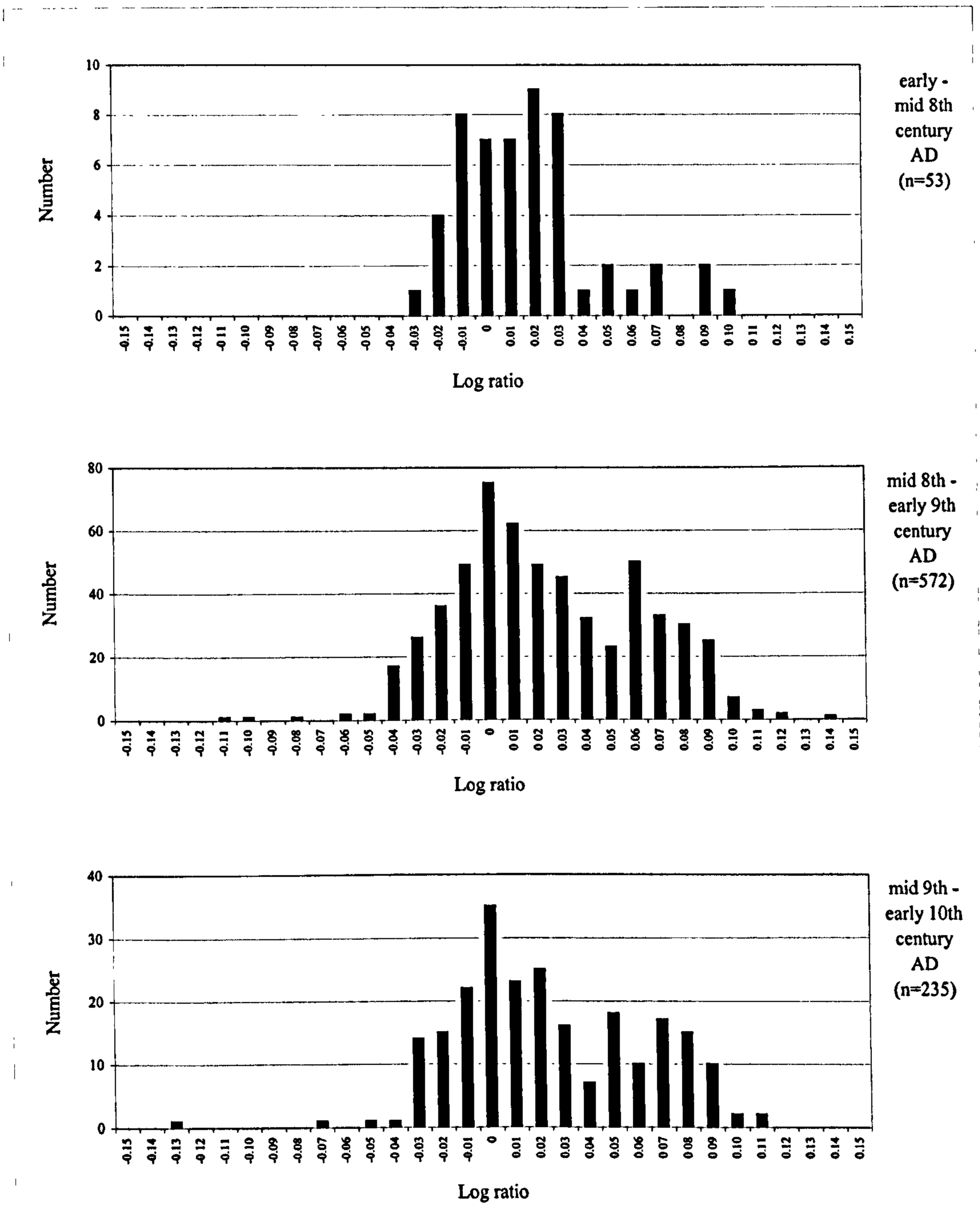


Figure 80. Cattle: Biometry: Log ratios: Inter-site comparison: Six Dials widths by chronological phase (Andrews 1997: 13-14; Bourdillon & Andrews 1997: 242; University of Southampton 2003)

NB. '0' represents the standard value: *Viroconium* Phase W average

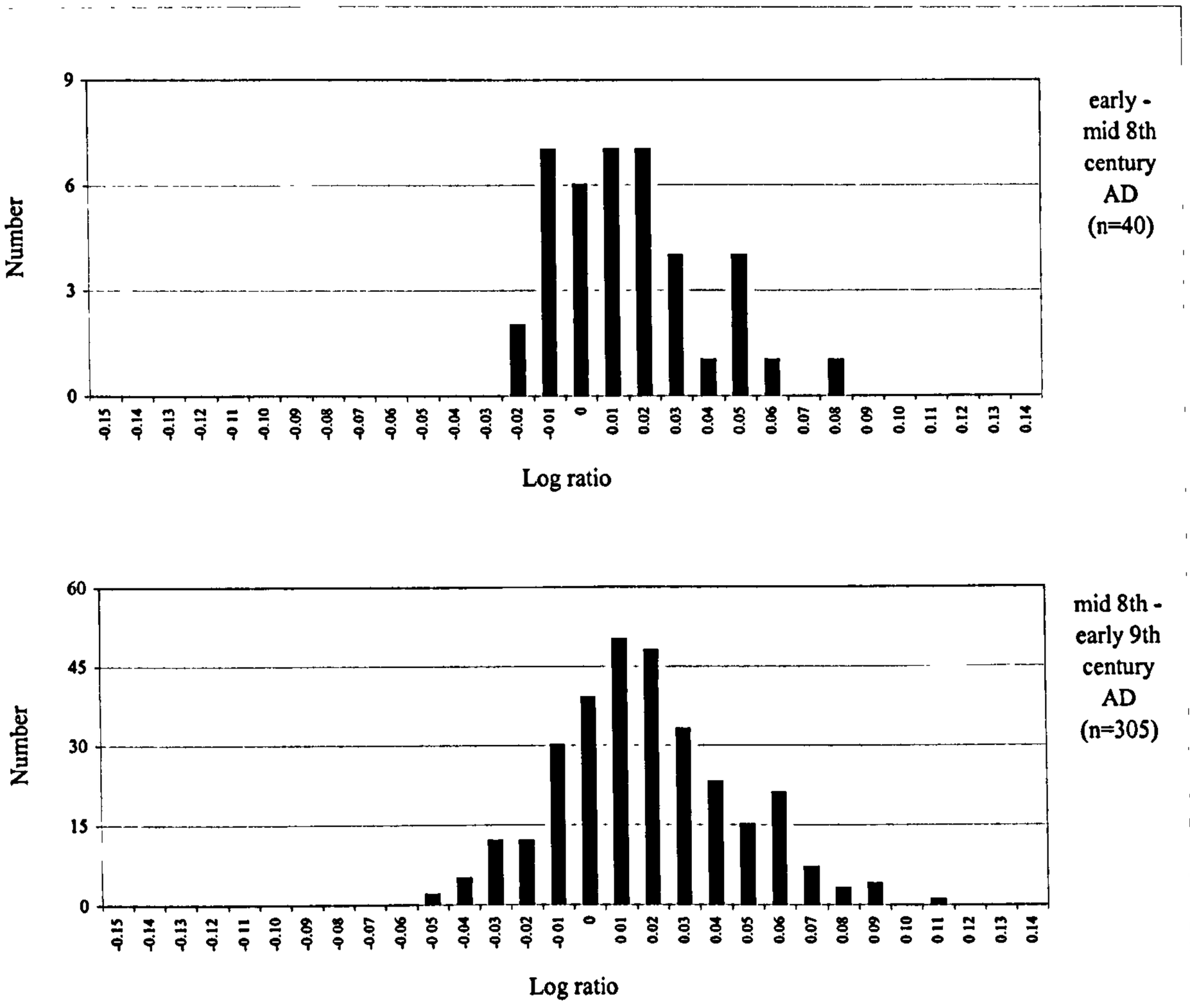


Figure 81. Cattle: Biometry: Log ratios: Inter-site comparison: Six Dials lengths by chronological phase (Andrews 1997: 13-14; Bourdillon & Andrews 1997: 242; University of Southampton 2003)

NB. '0' represents the standard value: *Viroconium* Phase W average

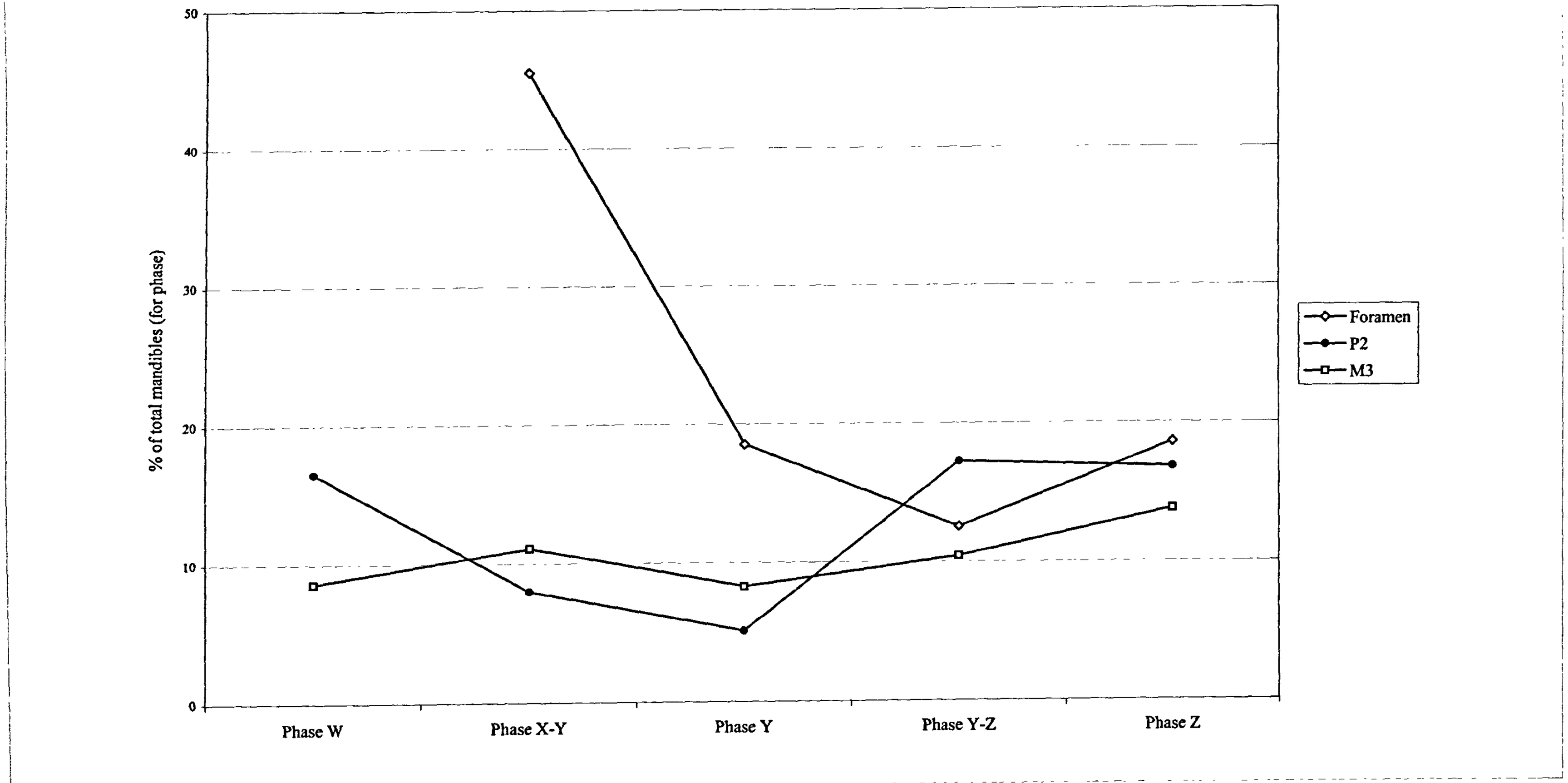


Figure 82. Cattle: Non-metric traits: Frequencies of morphologically diverse/extra mental nutrient foramina, absent second premolars and reduced/absent third molar hypoconulids by chronological phase

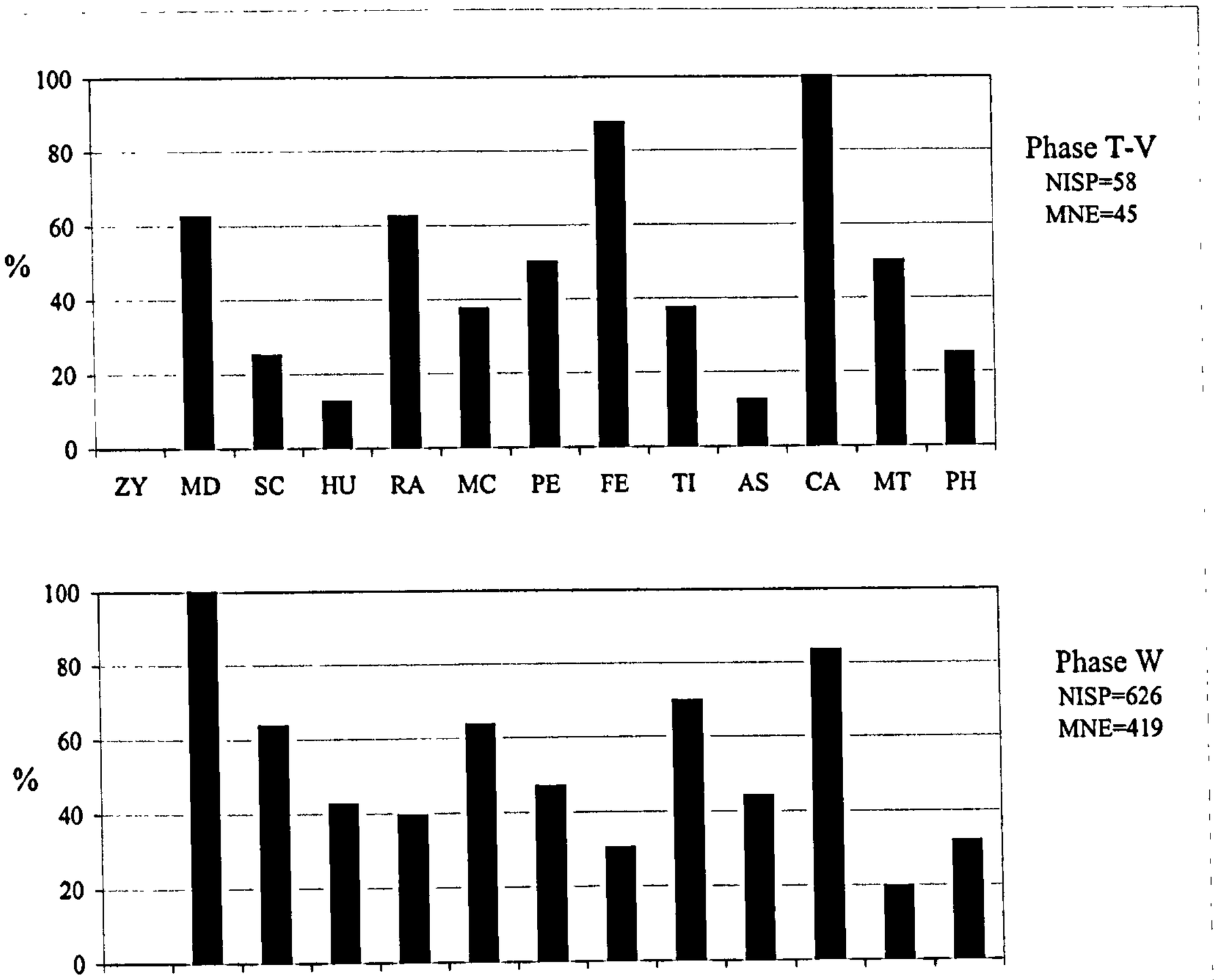


Figure 83. Pig: Anatomical representation: MNE by chronological phase expressed as %MNI

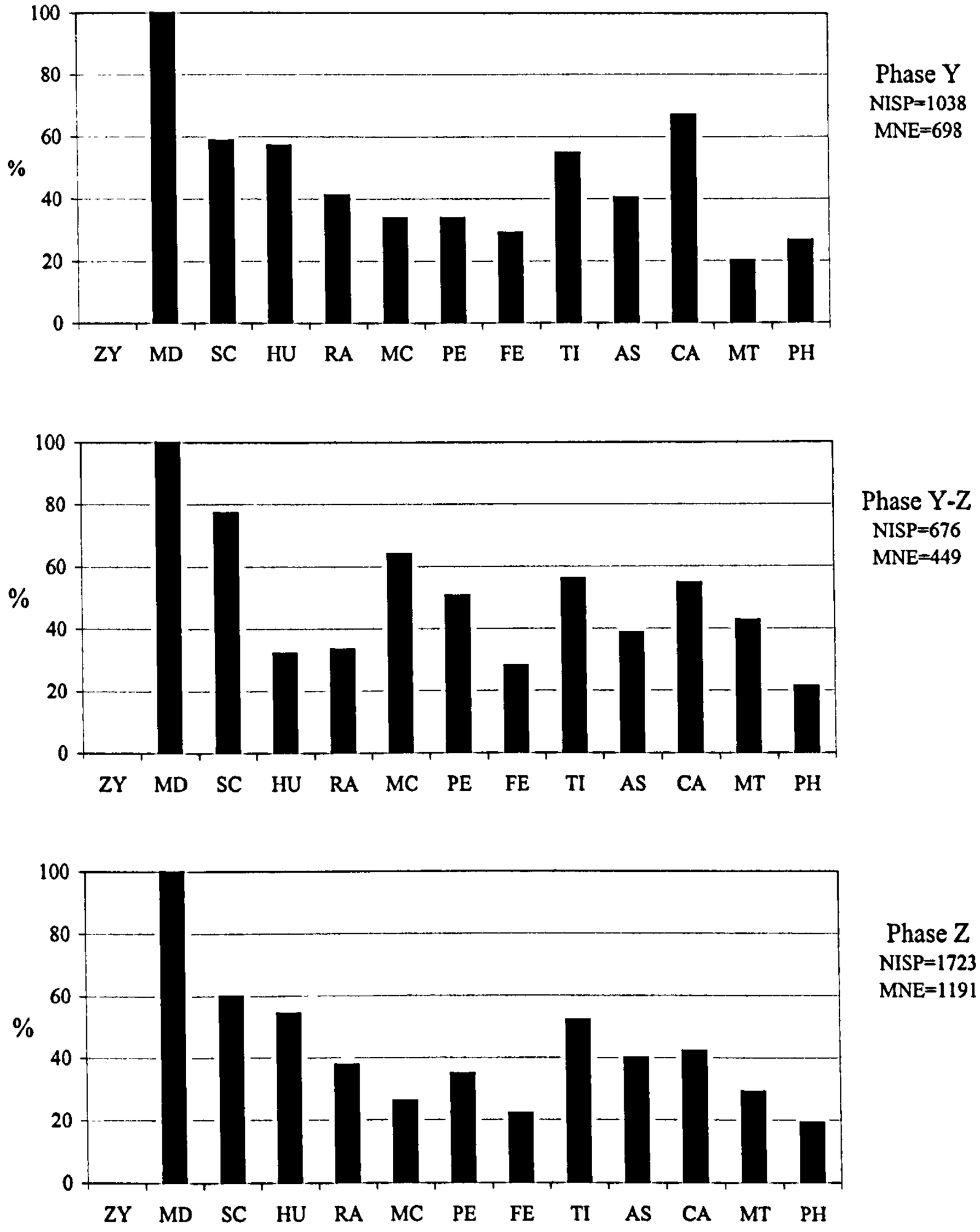


Figure 83 cont. Pig: Anatomical representation: MNE by chronological phase expressed as %MNI

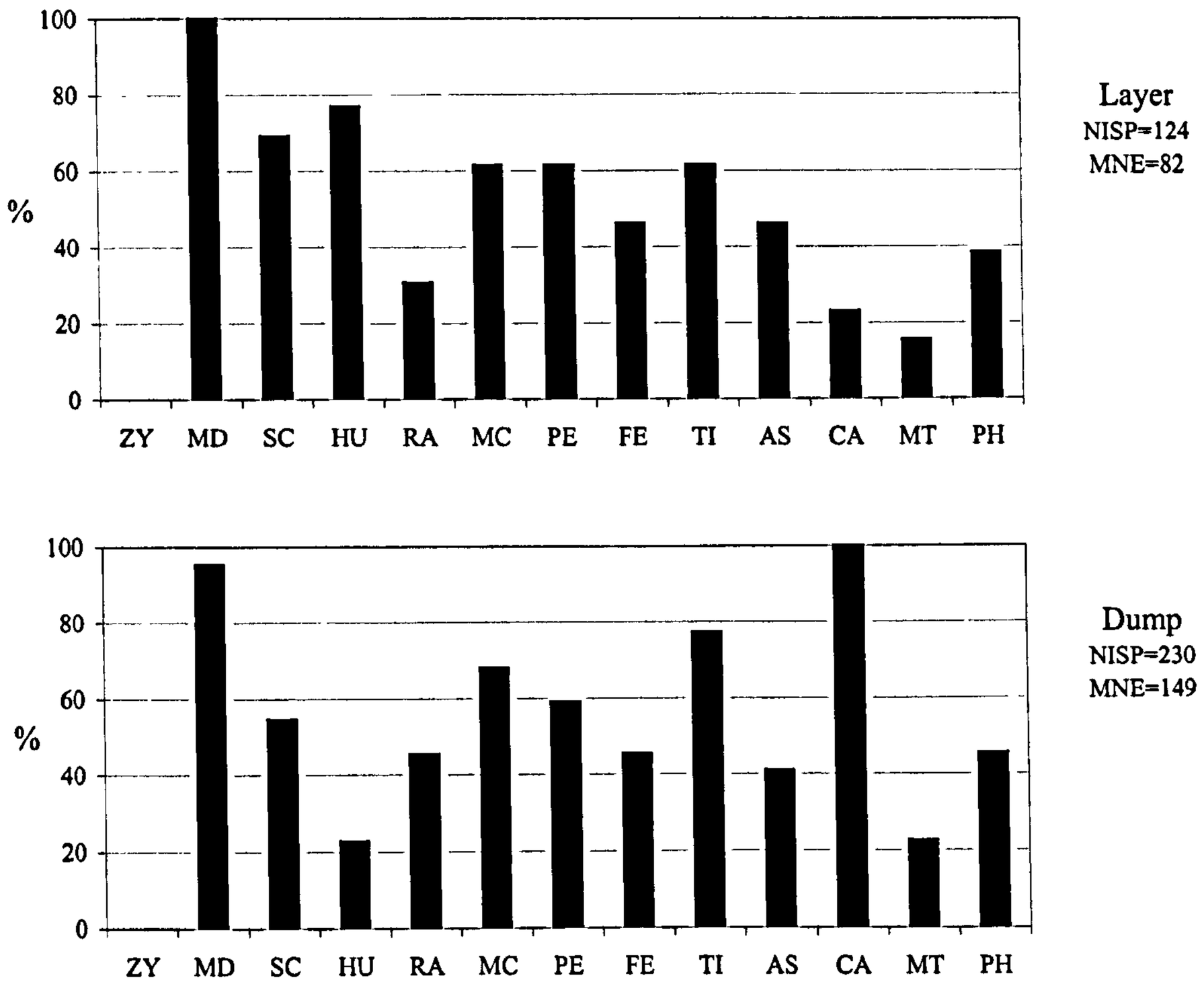


Figure 84. Pig: Anatomical representation: Phase W: MNE by feature type expressed as %MNI

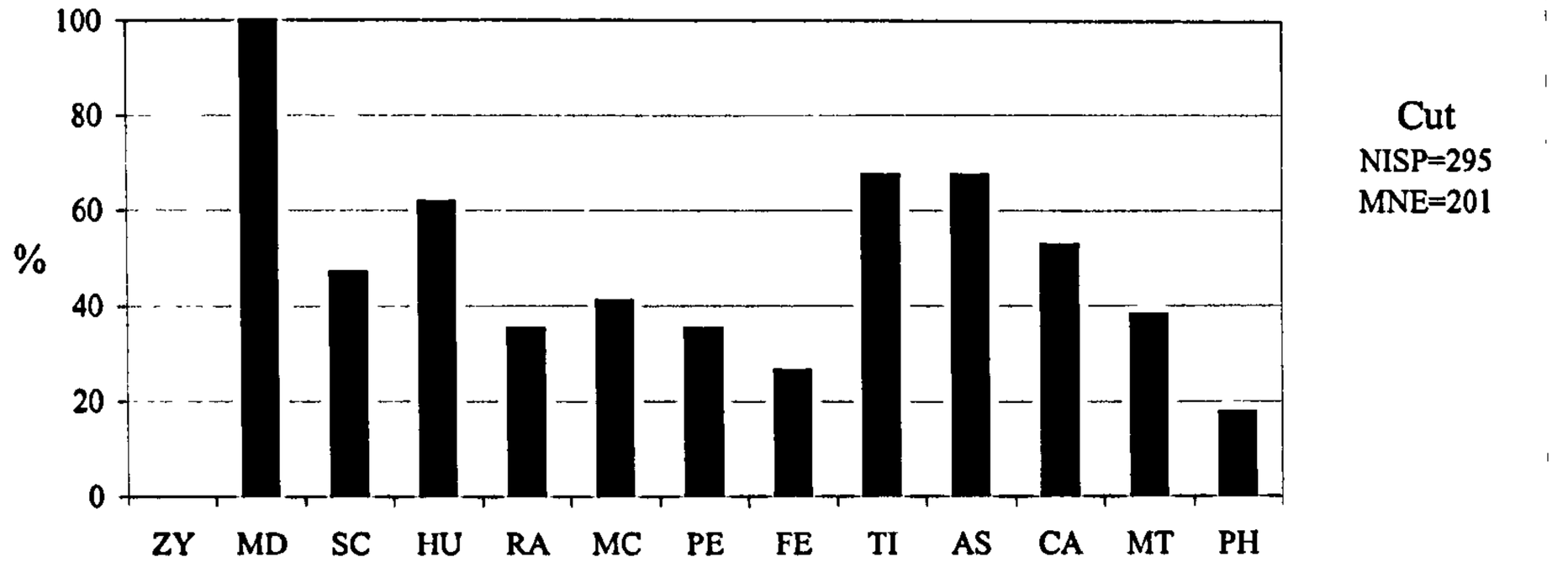


Figure 85. Pig: Anatomical representation: Phase X-Y: MNE by feature type expressed as %MNI

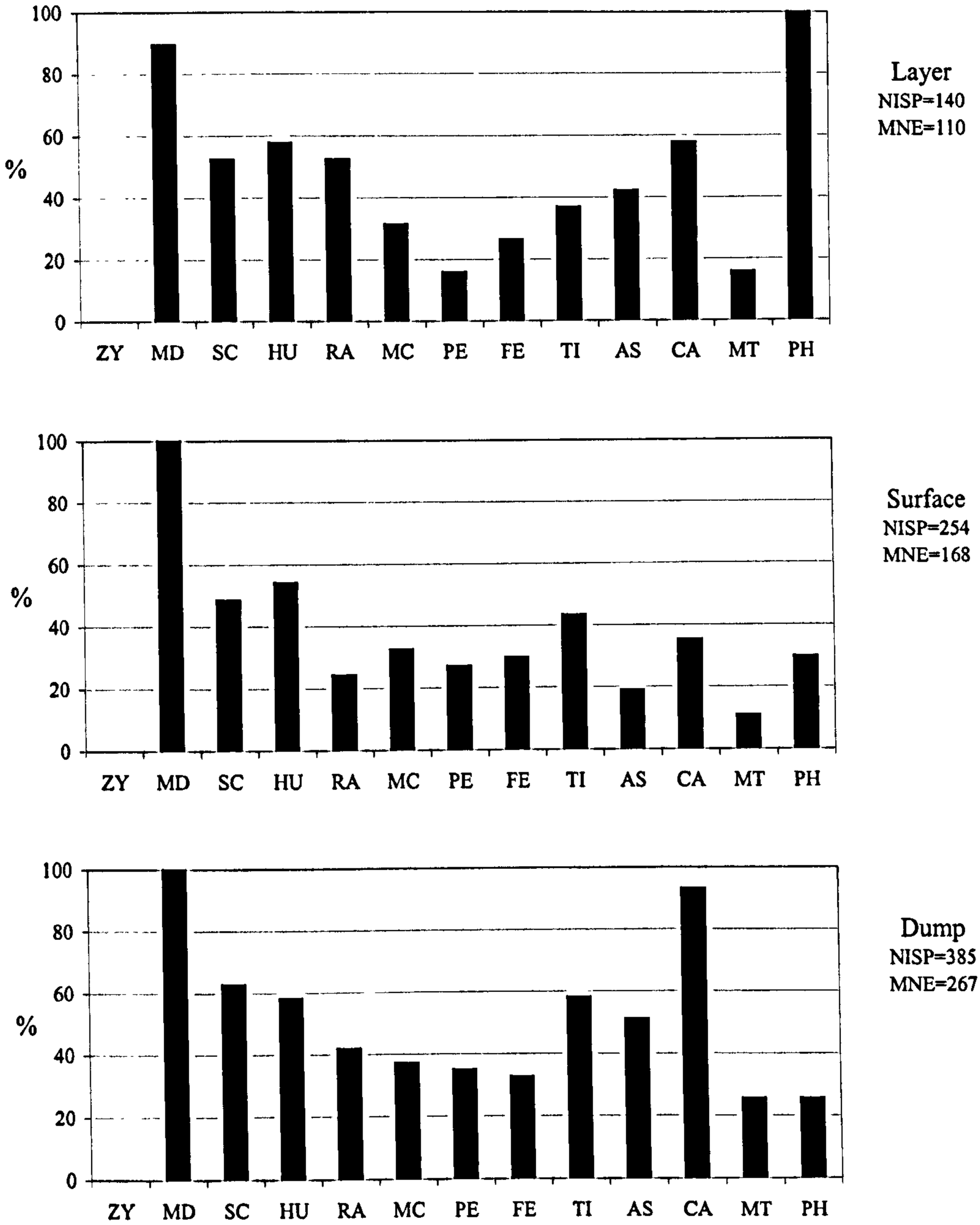


Figure 86. Pig: Anatomical representation: Phase Y: MNE by feature type expressed as %MNI

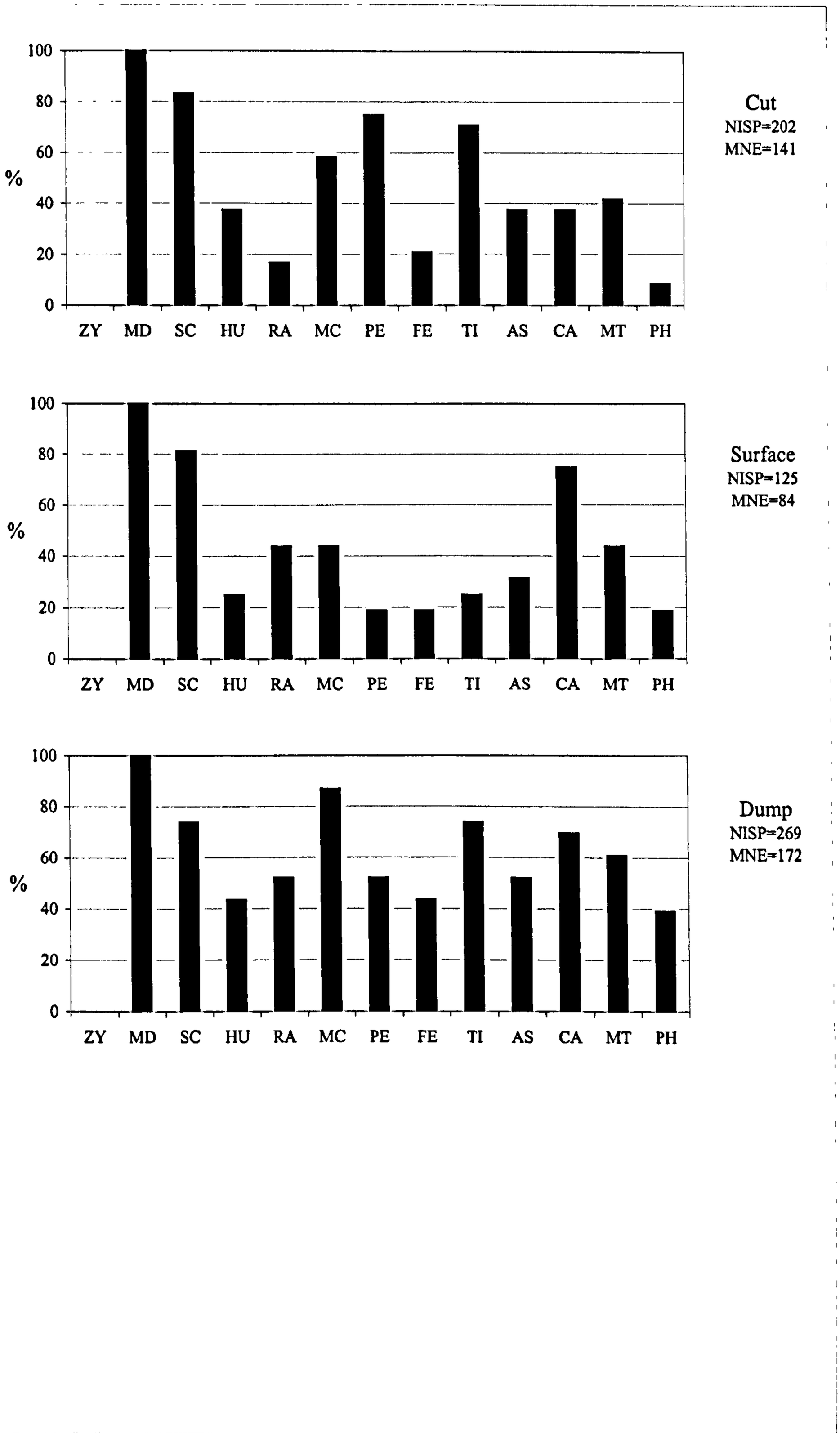


Figure 87. Pig: Anatomical representation: Phase Y-Z: MNE by feature type expressed as %MNI

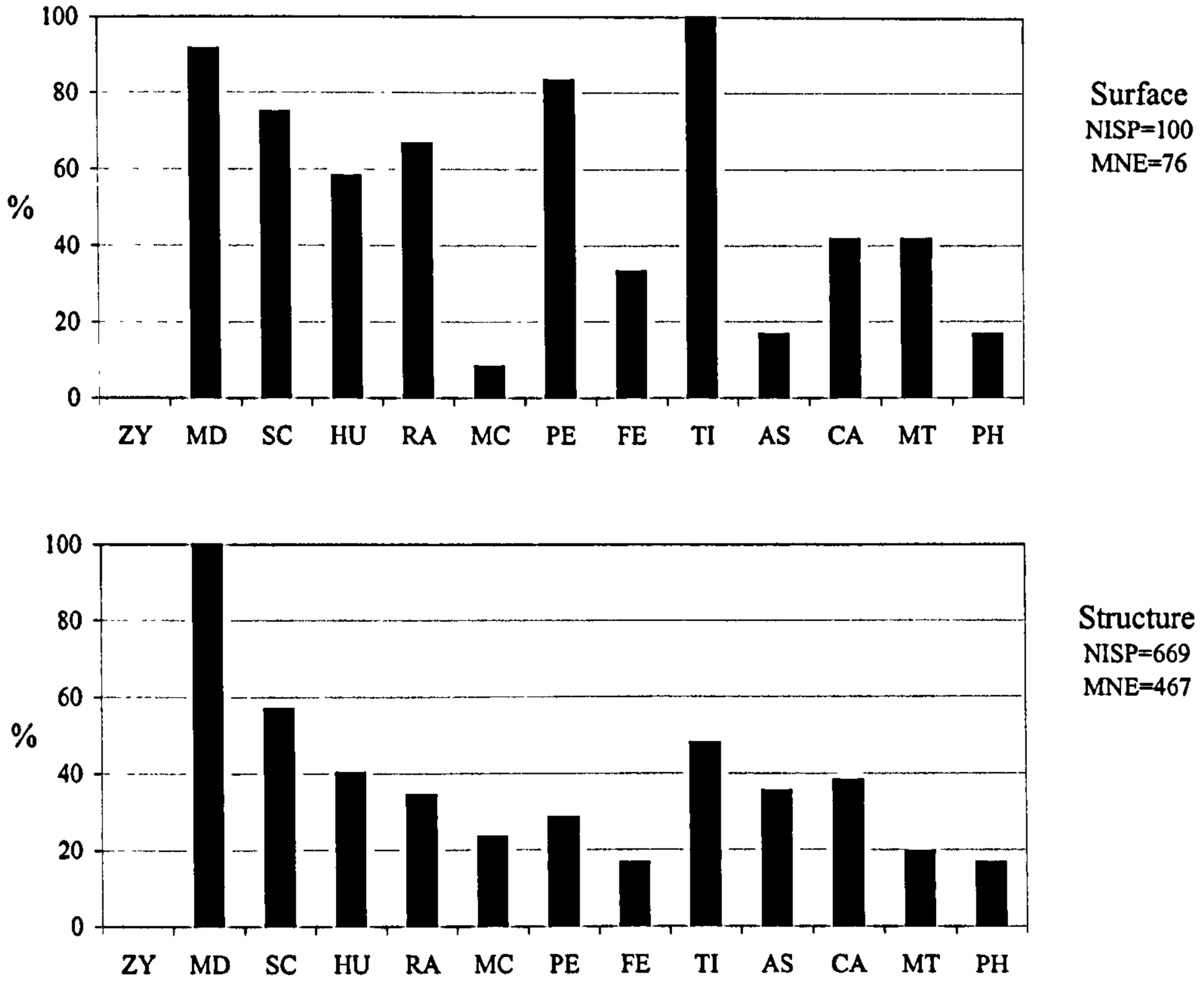


Figure 88. Pig: Anatomical representation: Phase Z: MNE by feature type expressed as %MNI.

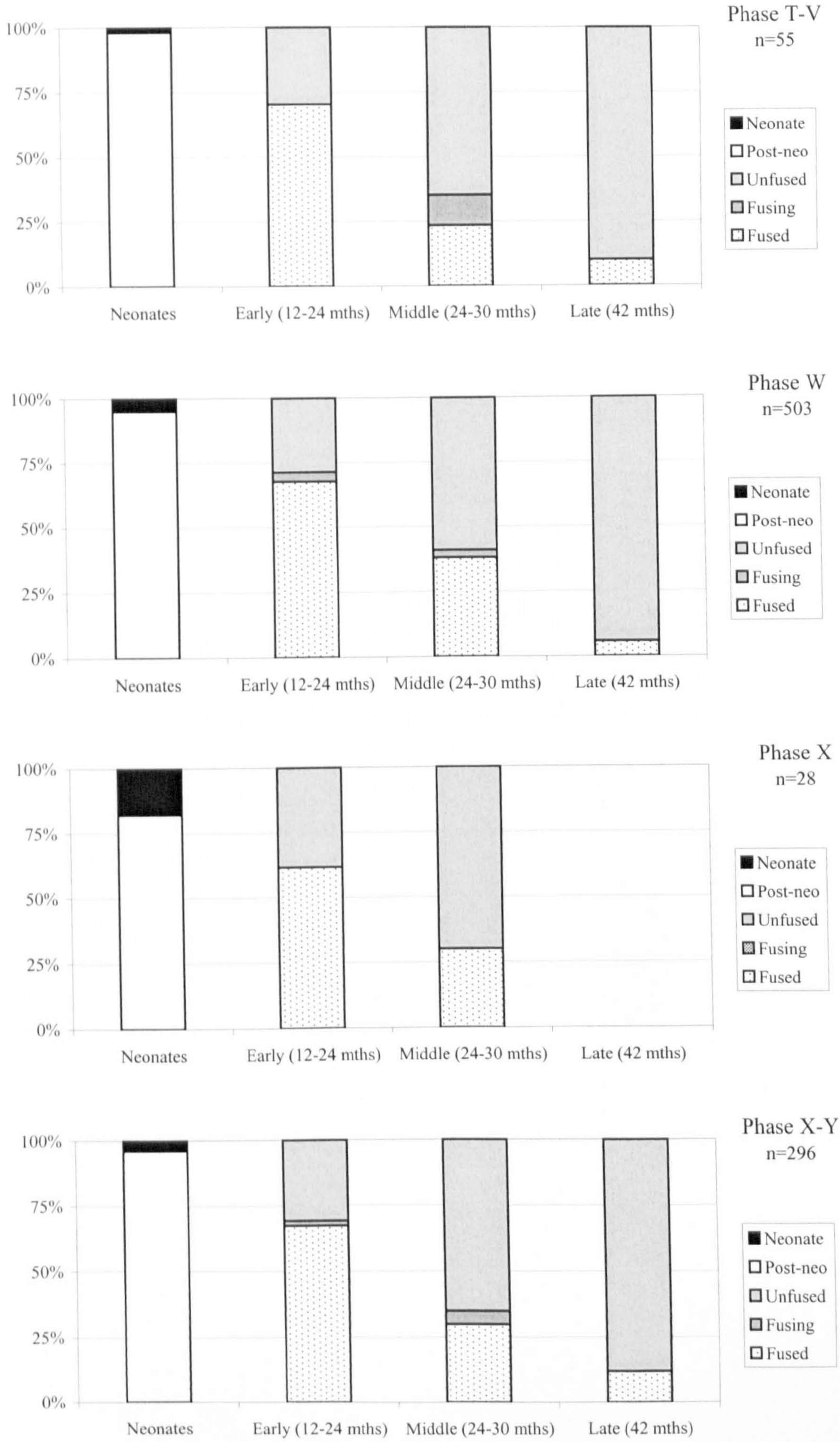


Figure 89. Pig: Mortality profiles: Post-cranial epiphyseal fusion by chronological phase, based on Schmid (1972: 75, Table 9) and Silver (1969: 264-265, Table G)

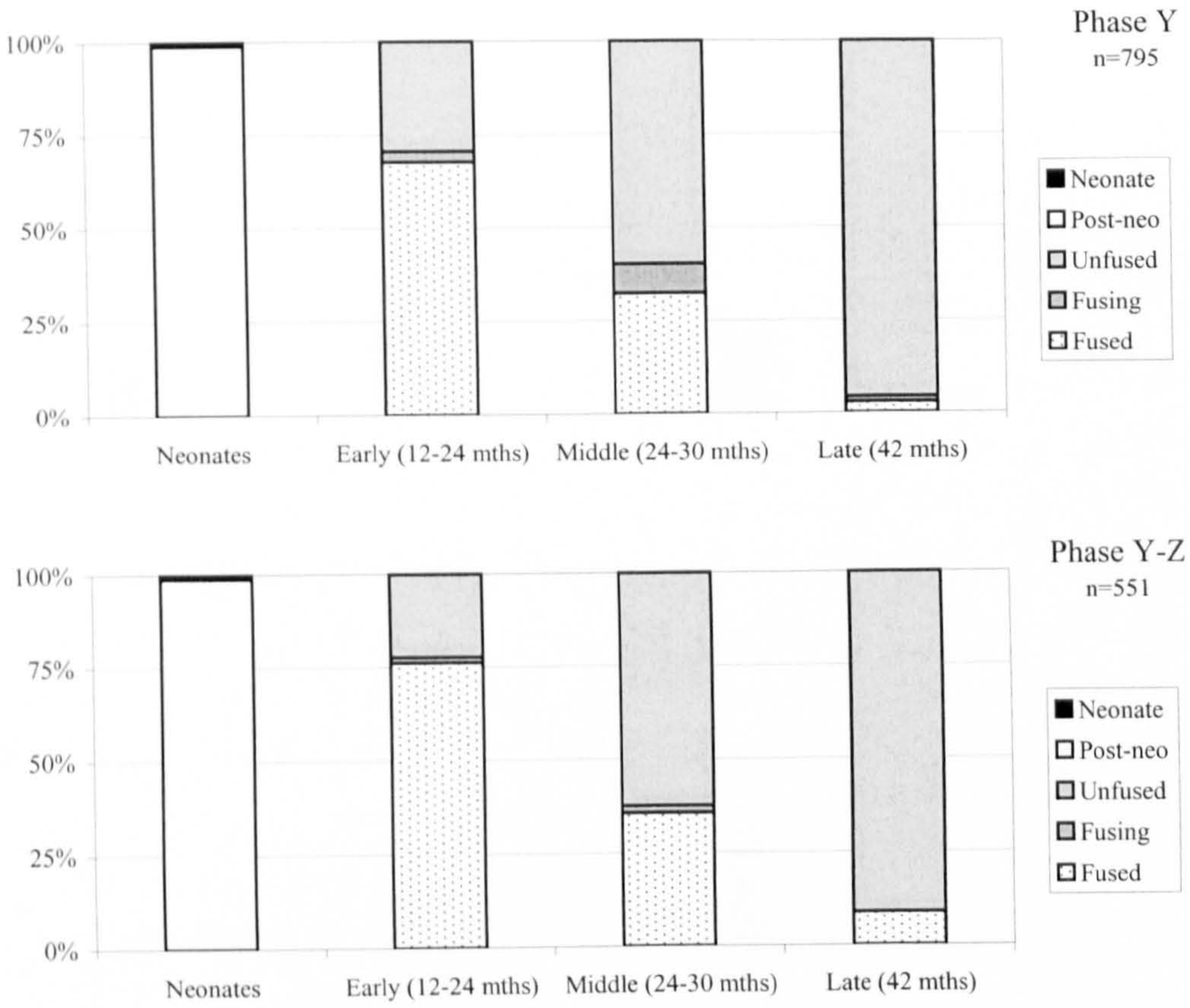


Figure 89 cont. Pig: Mortality profiles: Post-cranial epiphyseal fusion by chronological phase, based on Schmid (1972: 75, Table 9) and Silver (1969: 264-265, Table G)

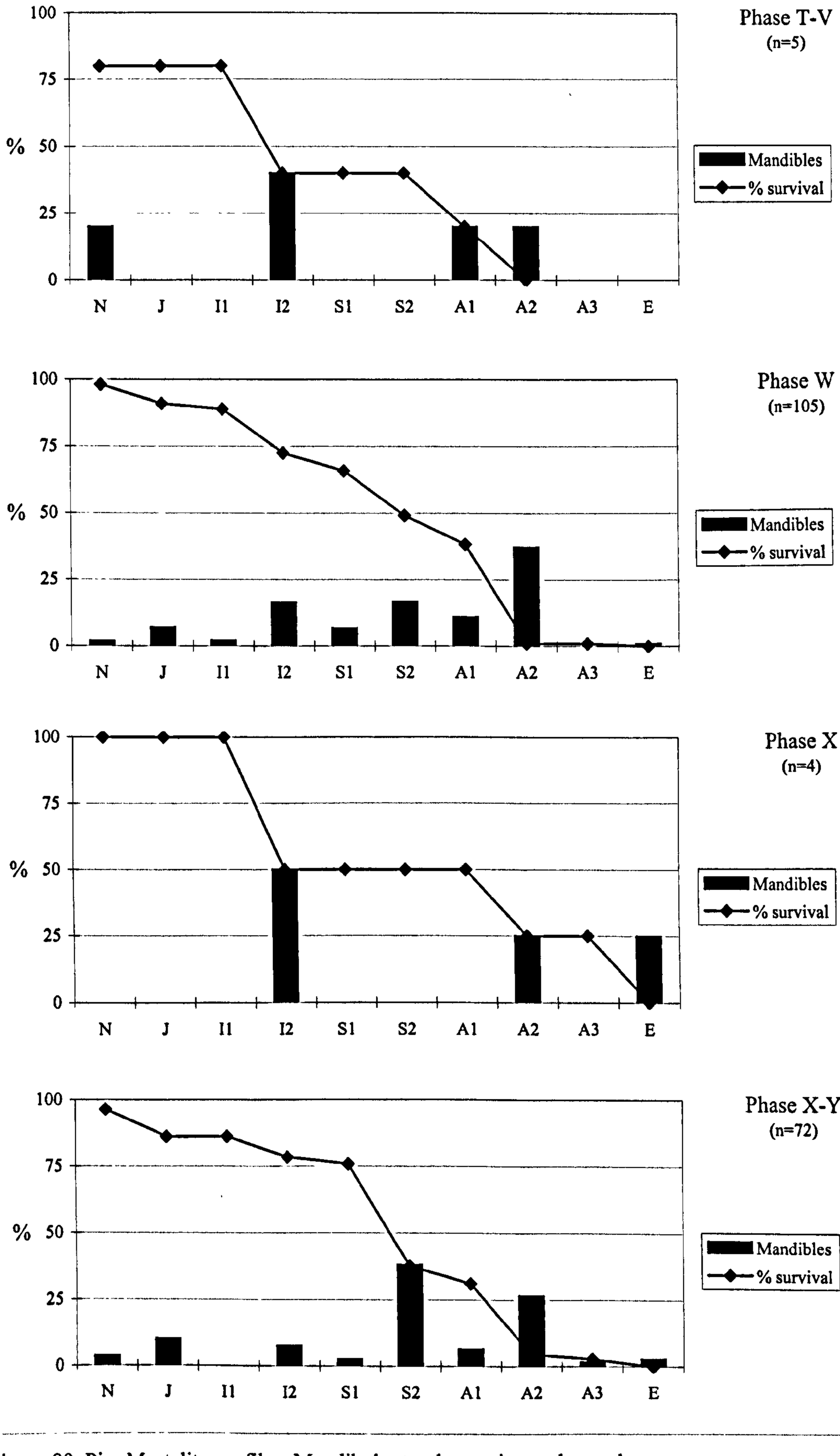


Figure 90. Pig: Mortality profiles: Mandibular tooth eruption and wear by chronological phase, based on Grant (1982), O'Connor (1991: 250, Table 67; 2003: 160) and Silver (1969: 264-265, Table G)

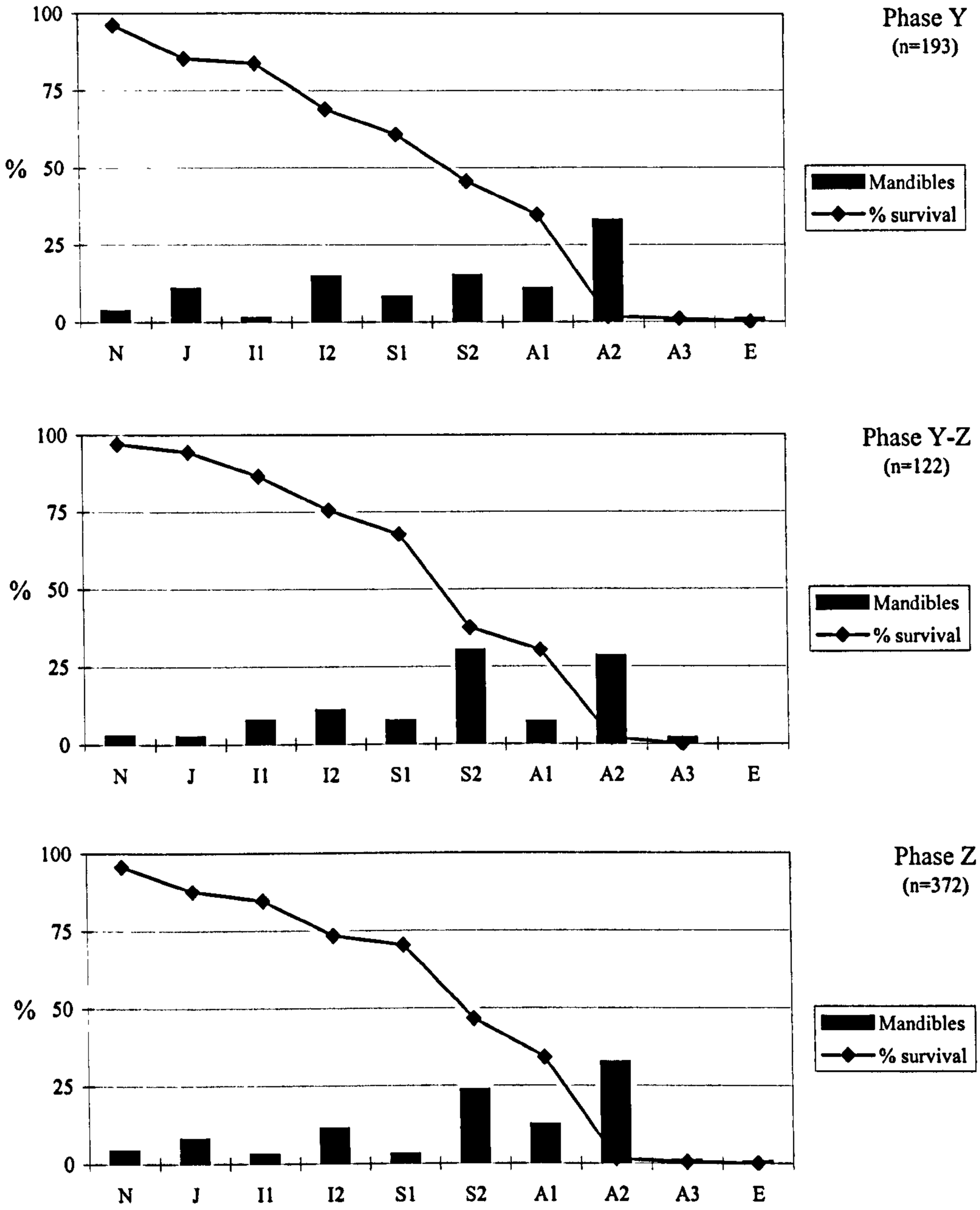


Figure 90 cont. Pig: Mortality profiles: Mandibular tooth eruption and wear by chronological phase, based on Grant (1982), O'Connor (1991: 250, Table 67; 2003: 160) and Silver (1969: 264-265, Table G)

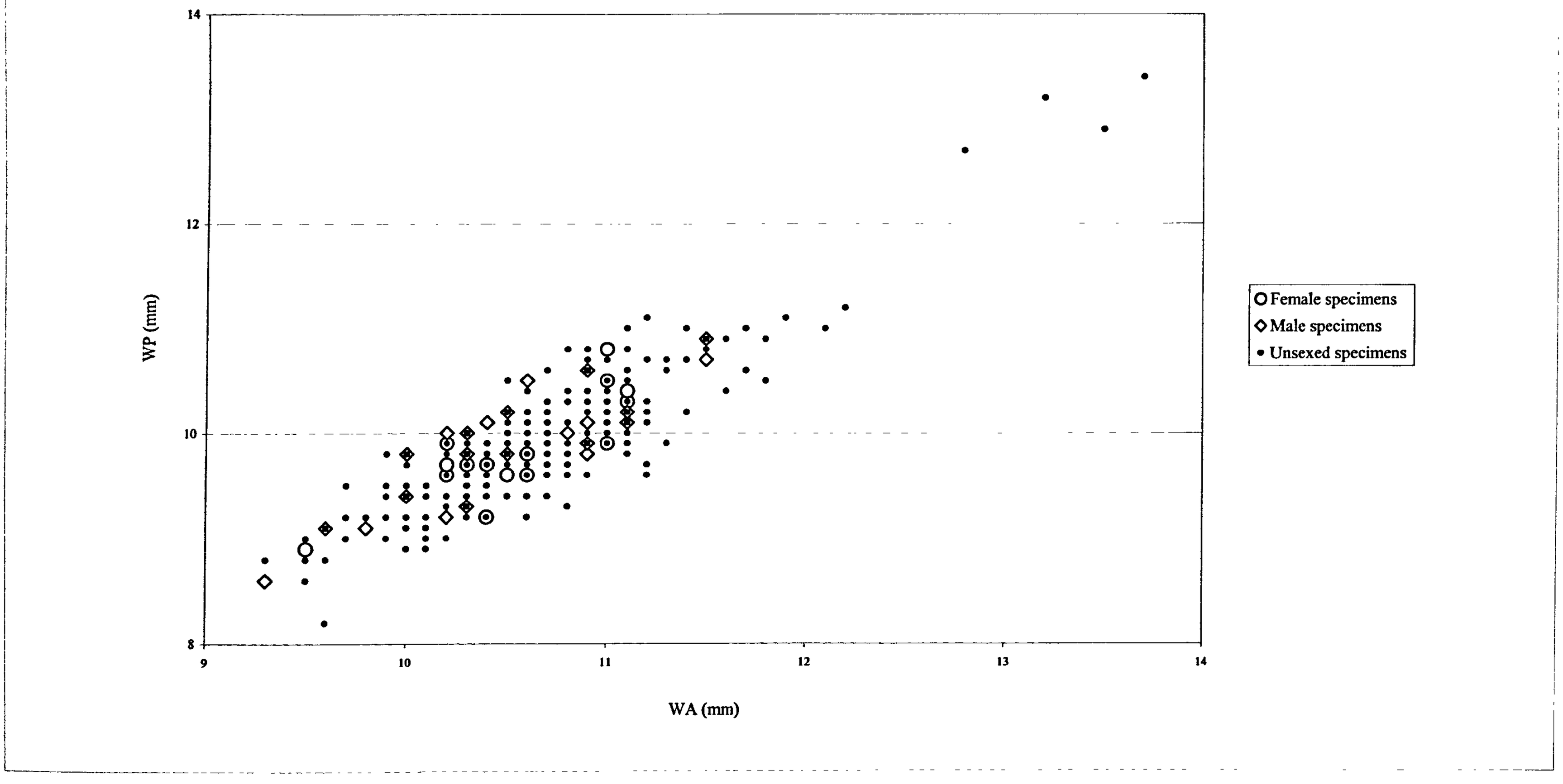


Figure 91. Pig: Biometry: Domestic/wild and/or sex: First molar shape indices (WA by WP), annotated with sex of individual where known

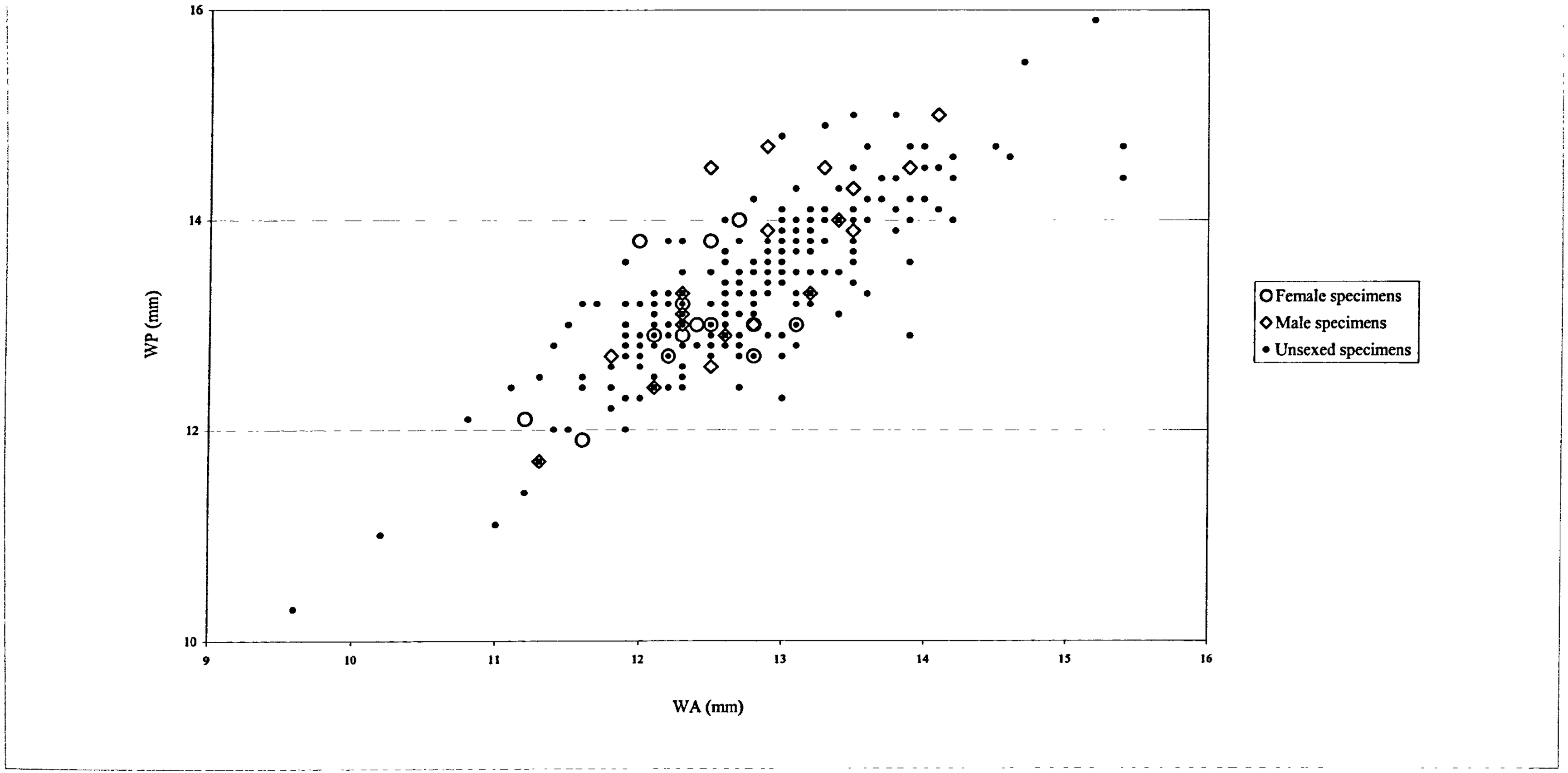


Figure 92. Pig: Biometry: Domestic/wild and/or sex: Second molar shape indices (WA by WP), annotated with sex of individual where known

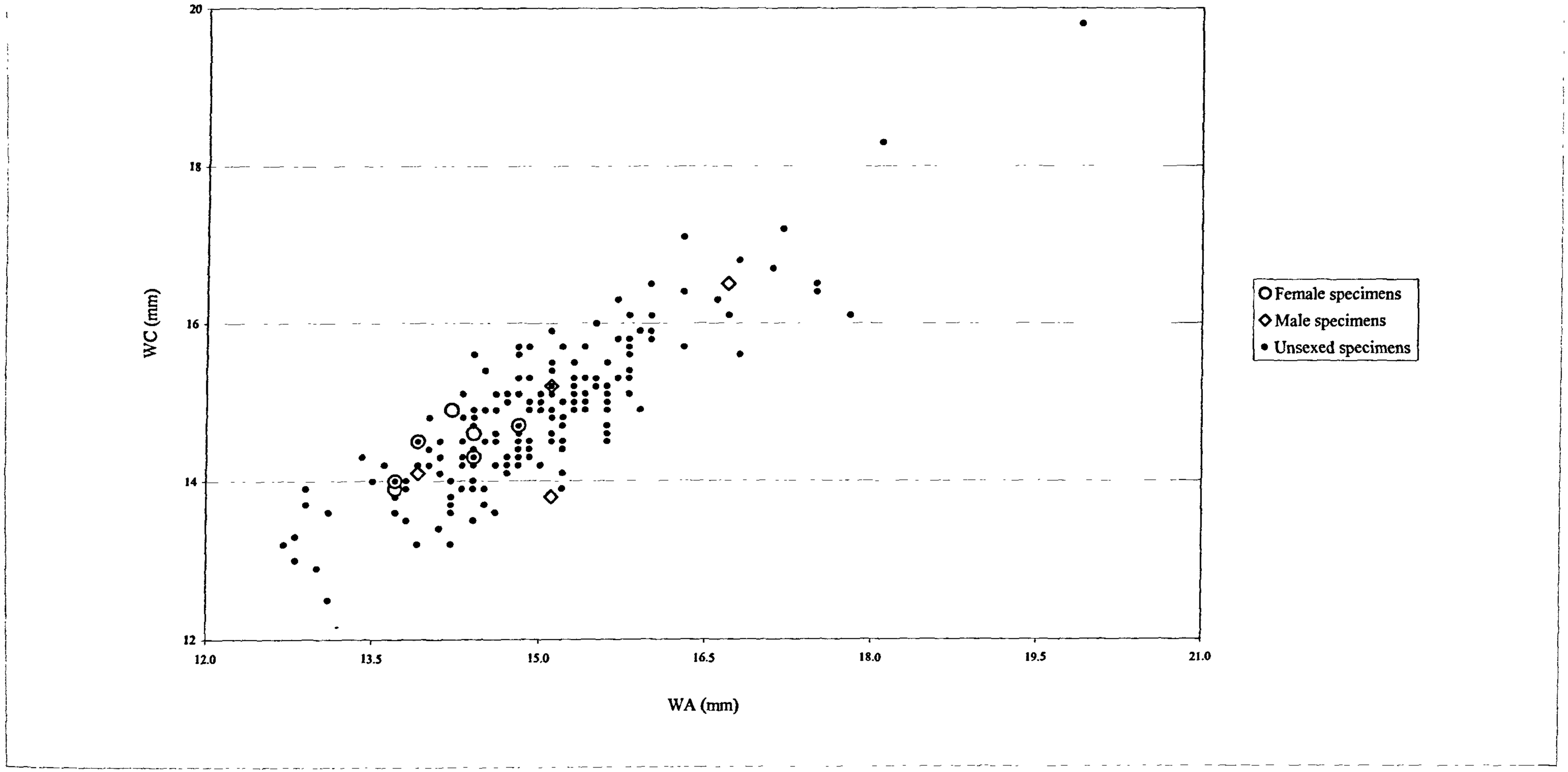


Figure 93. Pig: Biometry: Domestic/wild and/or sex: Third molar shape indices (WA by WC), annotated with sex of individual where known

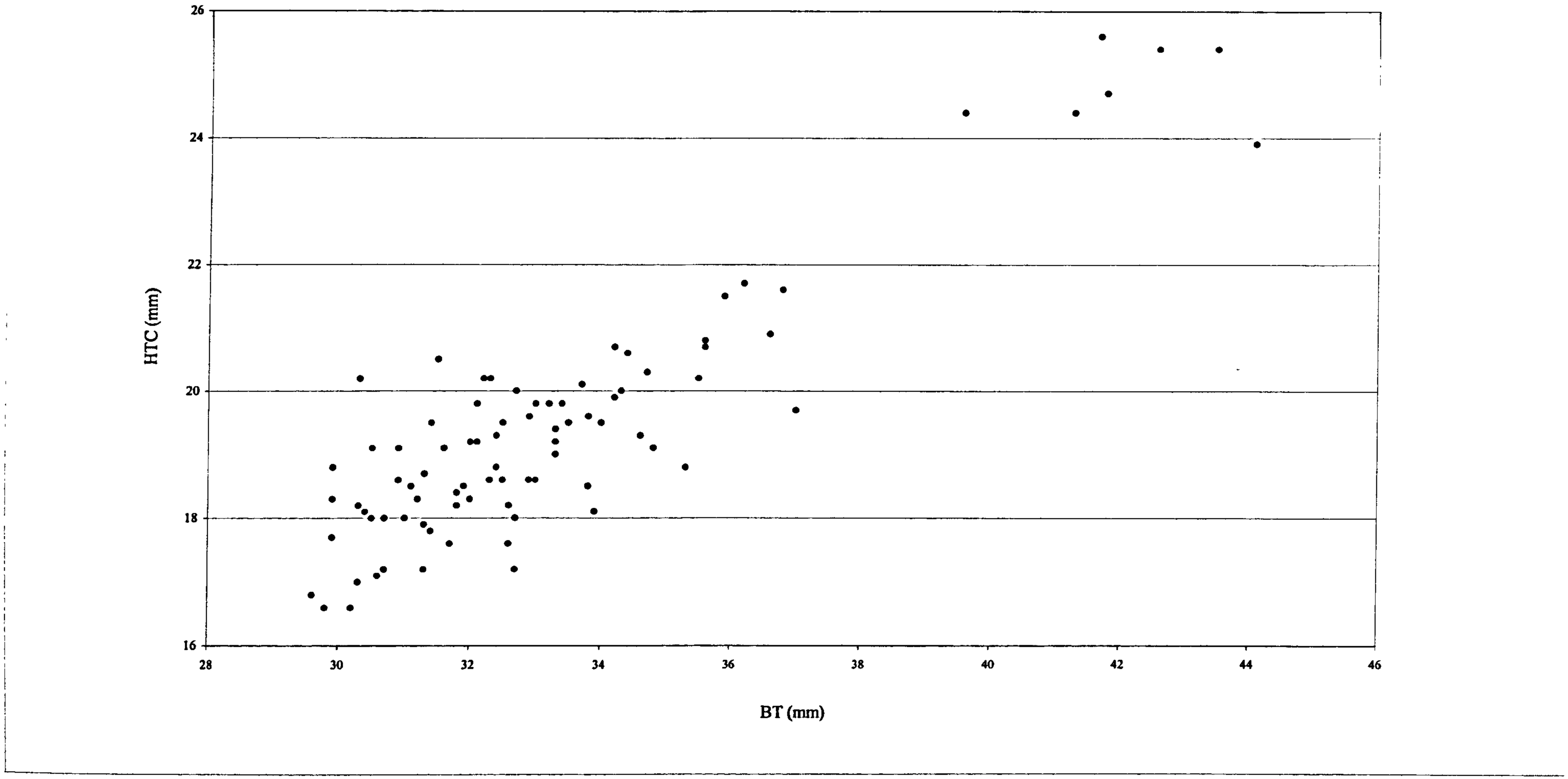


Figure 94. Pig: Biometry: Domestic/wild and/or sex: Humerus trochlea shape indices (BT by HTC)

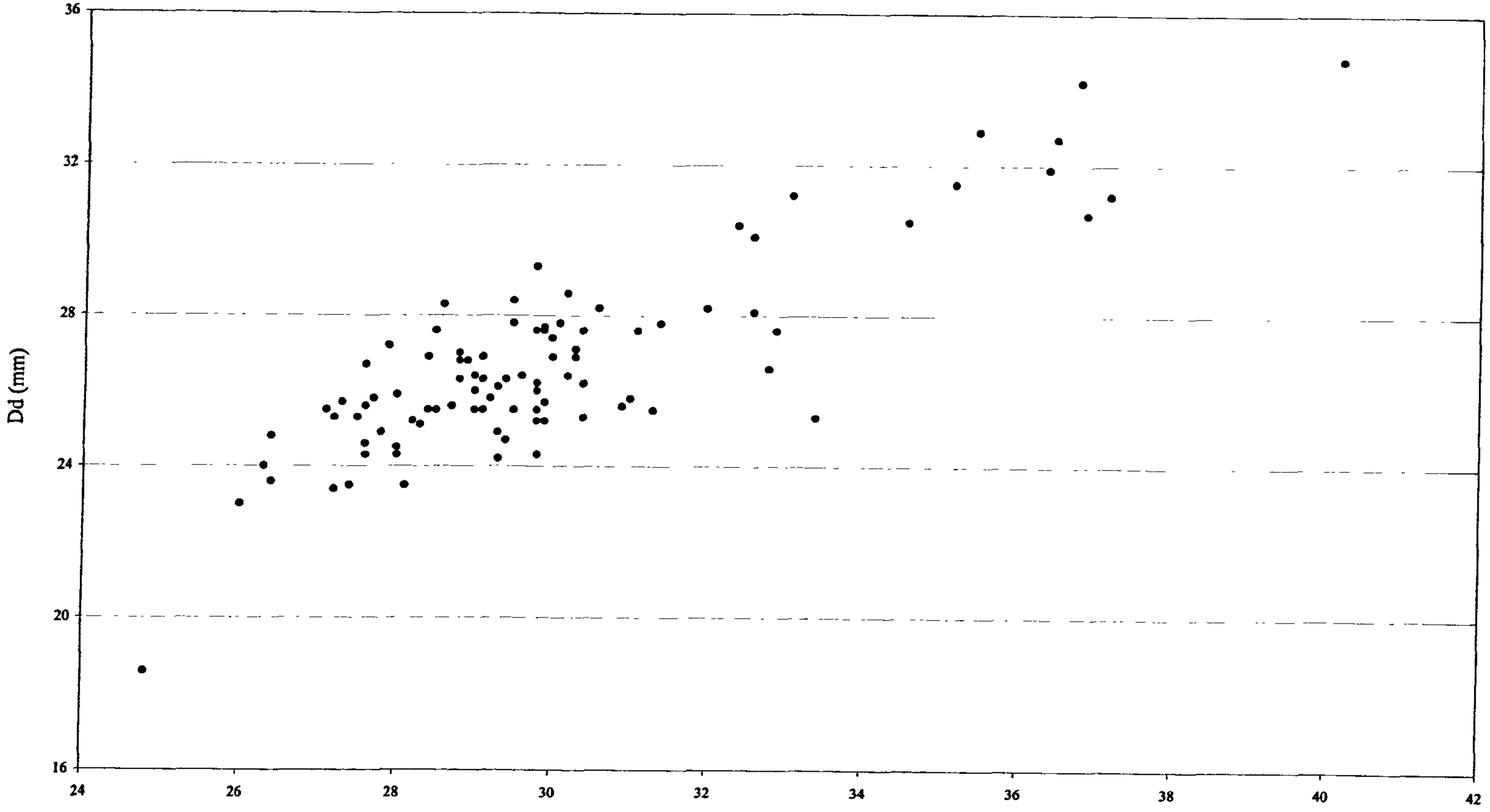


Figure 95. Pig: Biometry: Domestic/wild and/or sex: Distal tibia shape indices (Bd by Dd)

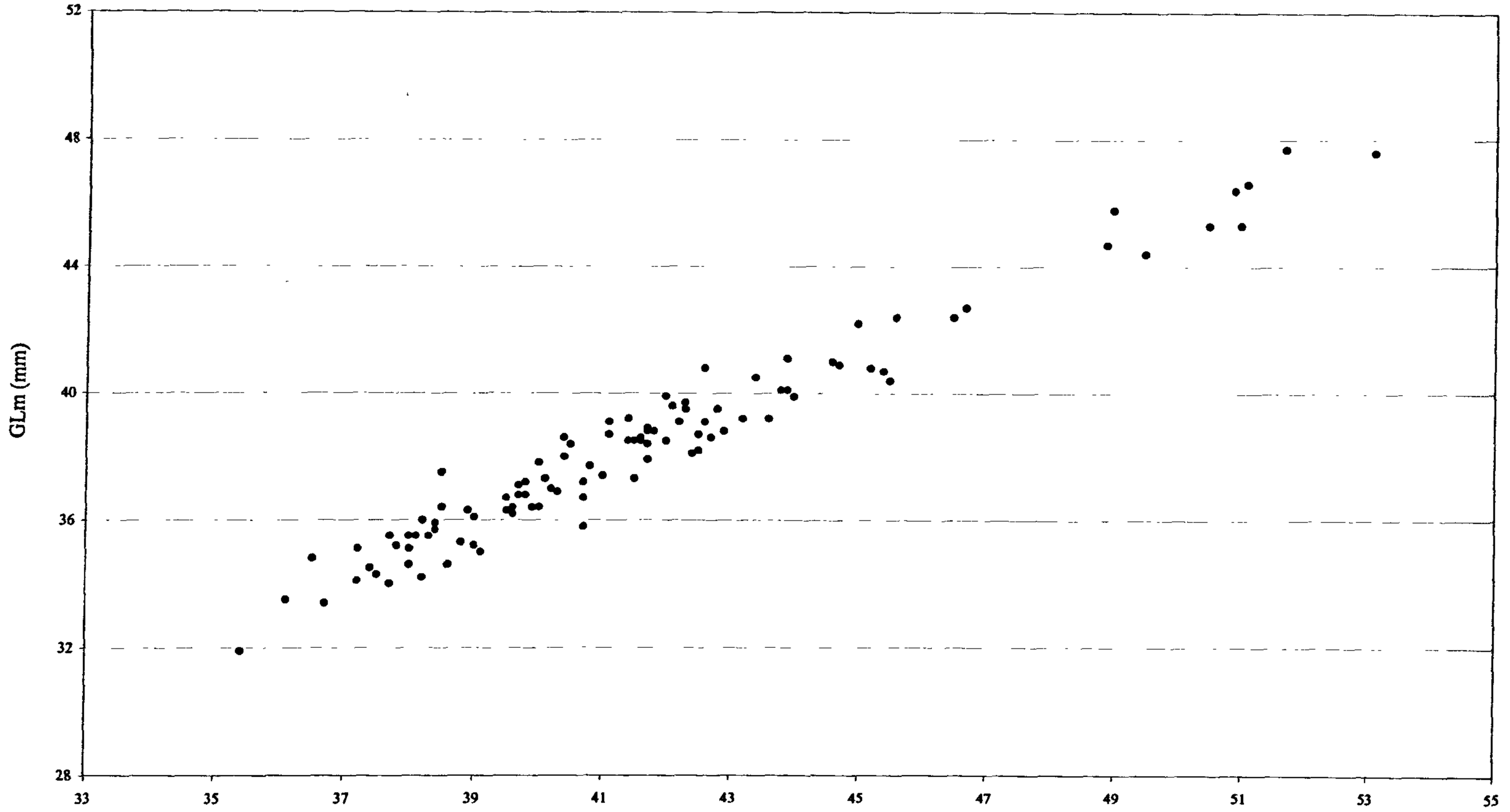


Figure 96. Pig: Biometry: Domestic/wild and/or sex: Astragalus shape indices (GLl by GLm)

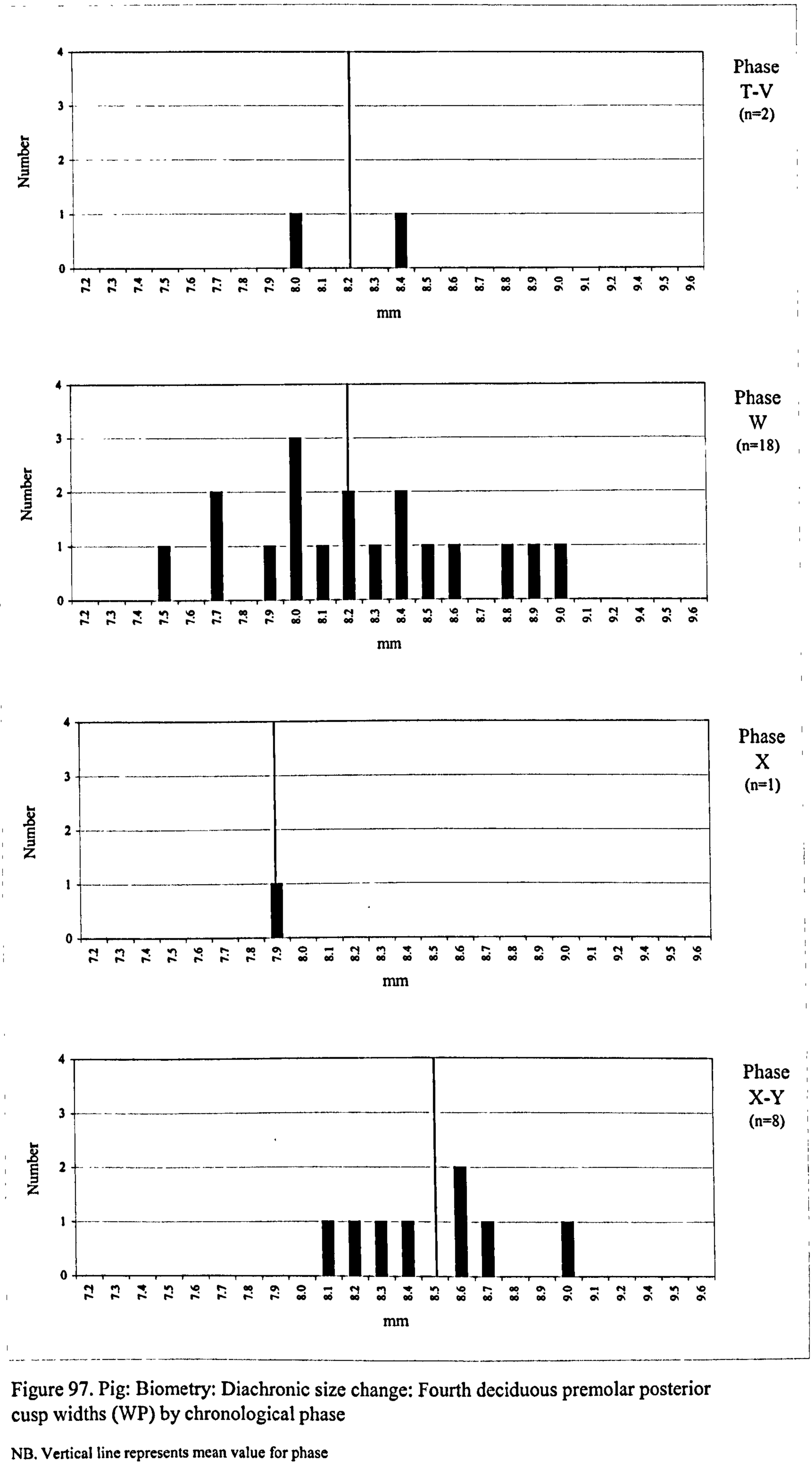


Figure 97. Pig: Biometry: Diachronic size change: Fourth deciduous premolar posterior cusp widths (WP) by chronological phase

NB. Vertical line represents mean value for phase

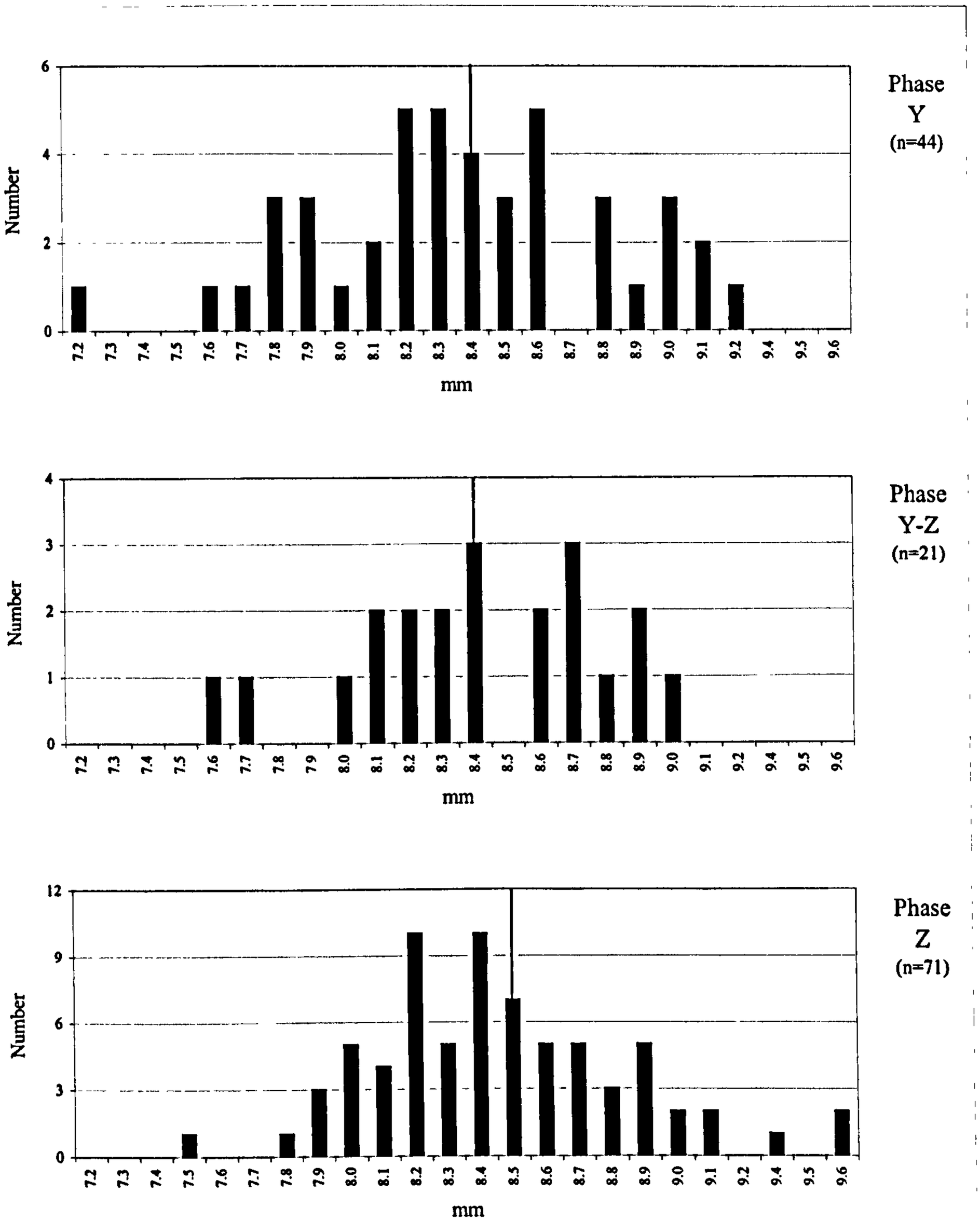


Figure 97 cont. Pig: Biometry: Diachronic size change: Fourth deciduous premolar posterior cusp widths (WP) by chronological phase

NB. Vertical line represents mean value for phase

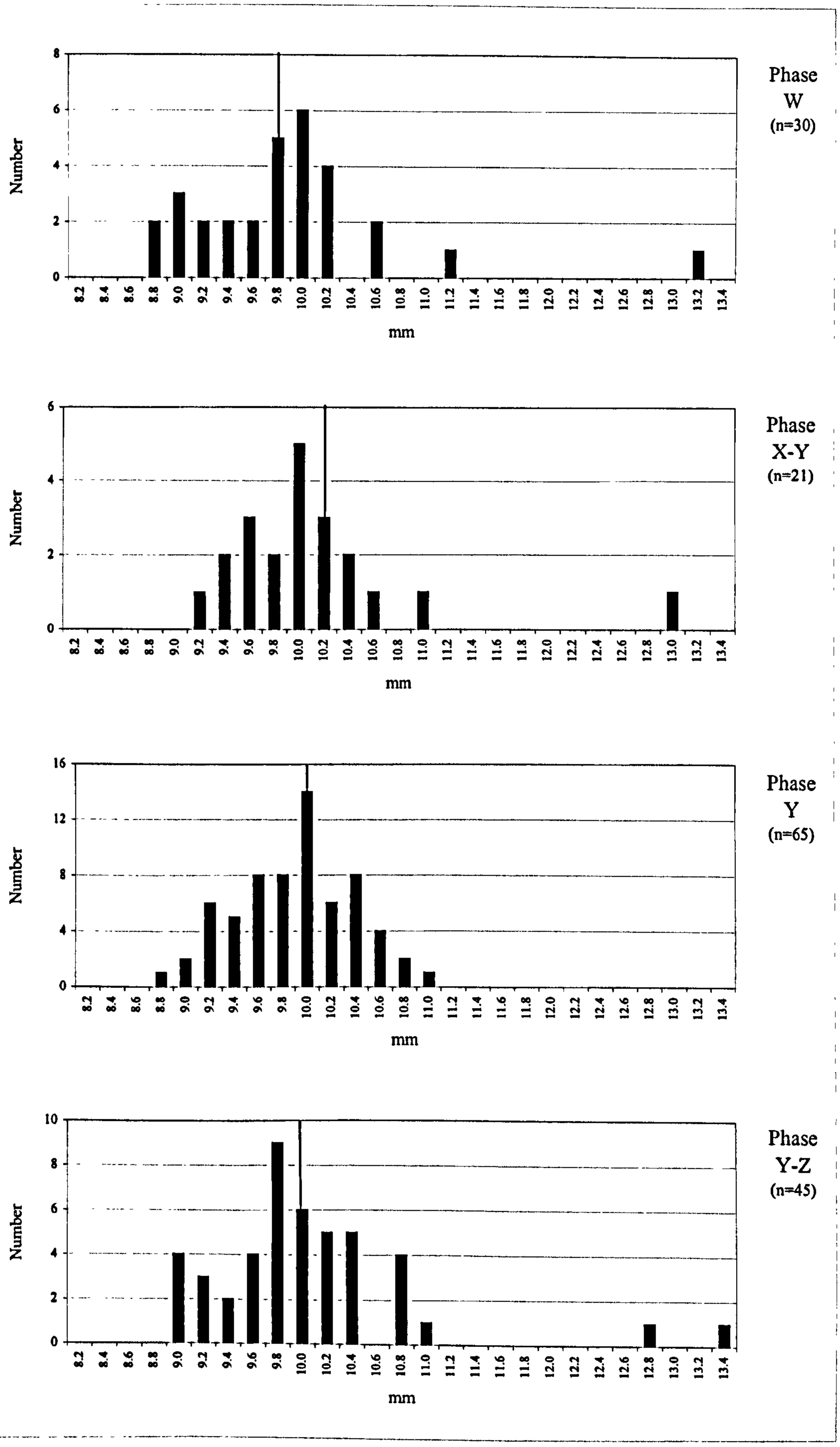


Figure 98. Pig: Biometry: Diachronic size change: First molar anterior cusp widthd (WA) by chronological phase

NB. Figures rounded to nearest 0.2 mm; vertical line represents mean value for phase

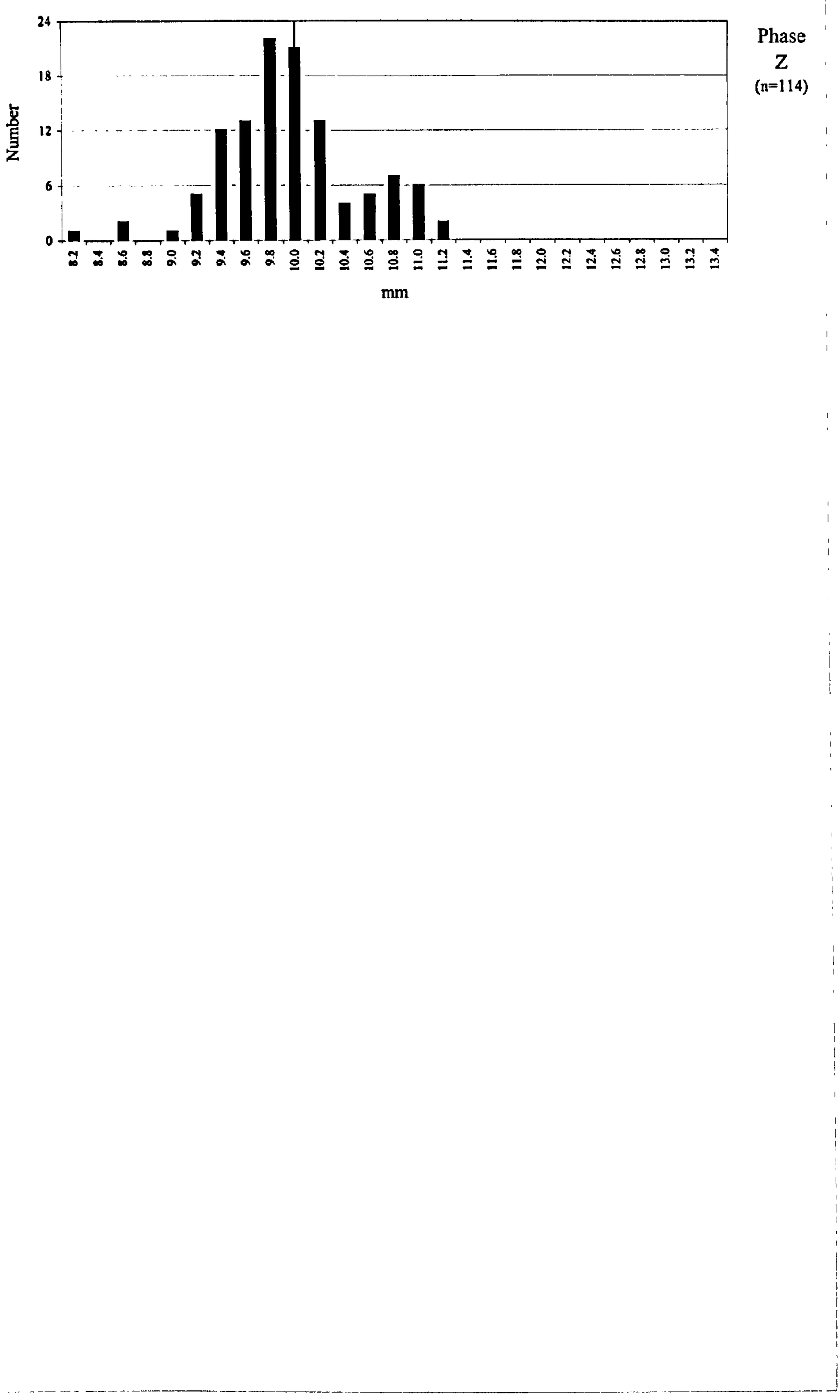


Figure 98 cont. Pig: Biometry: Diachronic size change: First molar anterior cusp widths (WA) by chronological phase

NB. Figures rounded to nearest 0.2 mm; vertical line represents mean value for phase

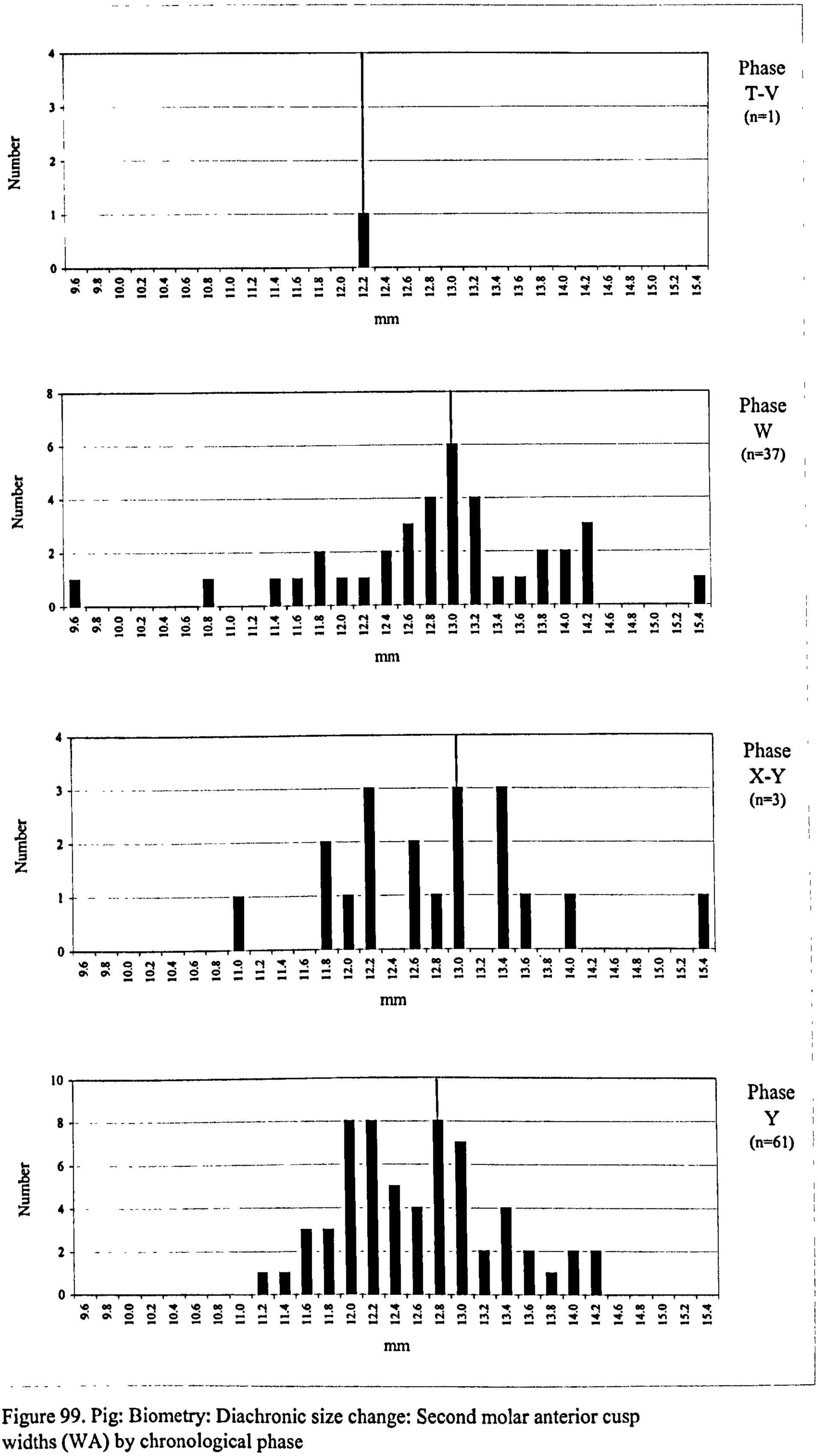


Figure 99. Pig: Biometry: Diachronic size change: Second molar anterior cusp widths (WA) by chronological phase

NB. Figures rounded to nearest 0.2 mm; vertical line represents mean value for phase

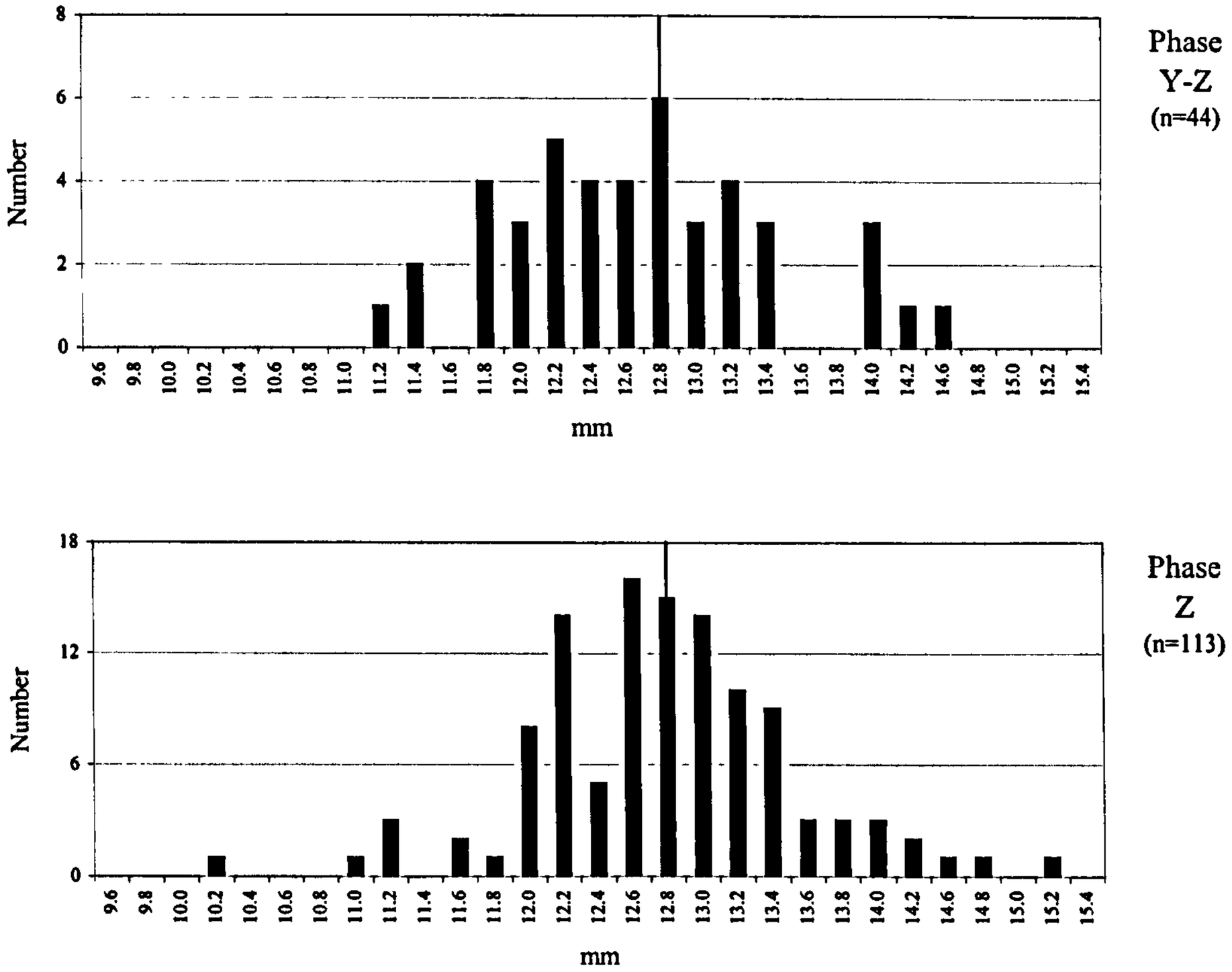


Figure 99 cont. Pig: Biometry: Diachronic size change: Second molar anterior cusp widths (WA) by chronological phase

NB. Figures rounded to nearest 0.2 mm; vertical line represents mean value for phase

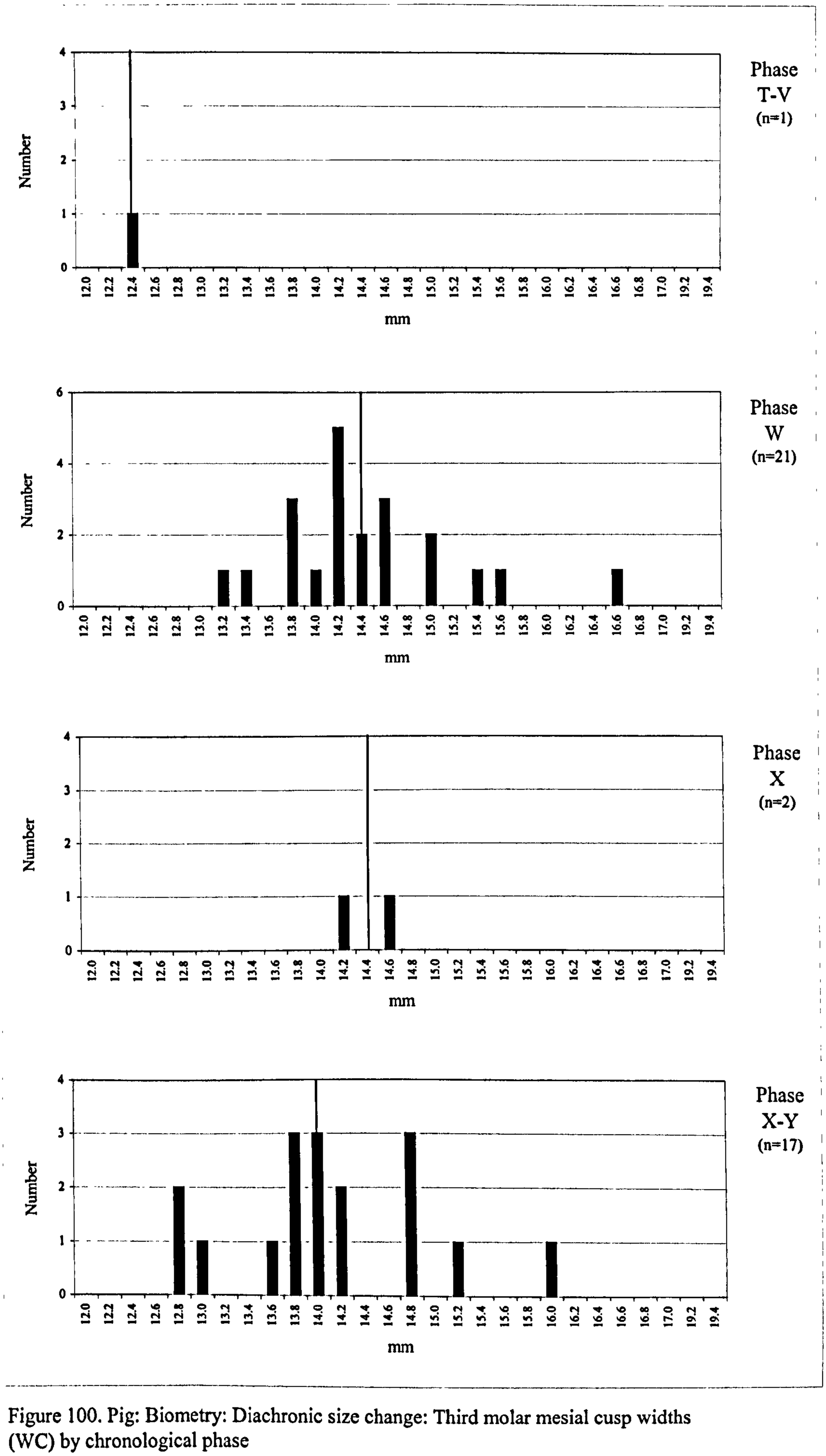


Figure 100. Pig: Biometry: Diachronic size change: Third molar mesial cusp widths (WC) by chronological phase

NB. Figures rounded to nearest 0.2 mm; vertical line represents mean value for phase

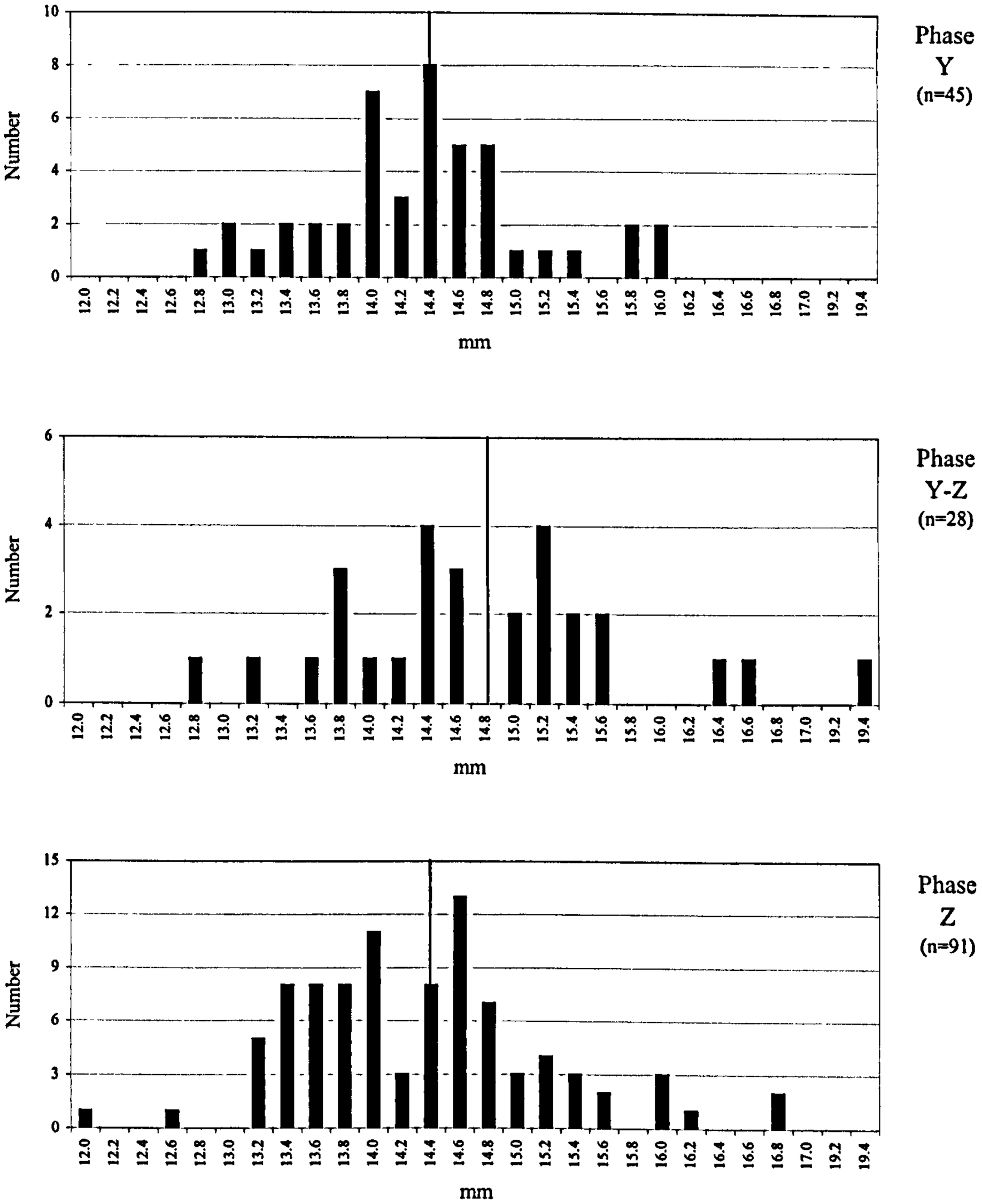


Figure 100 cont. Pig: Biometry: Diachronic size change: Third molar mesial cusp widths (WC) by chronological phase

NB. Figures rounded to nearest 0.2 mm; vertical line represents mean value for phase

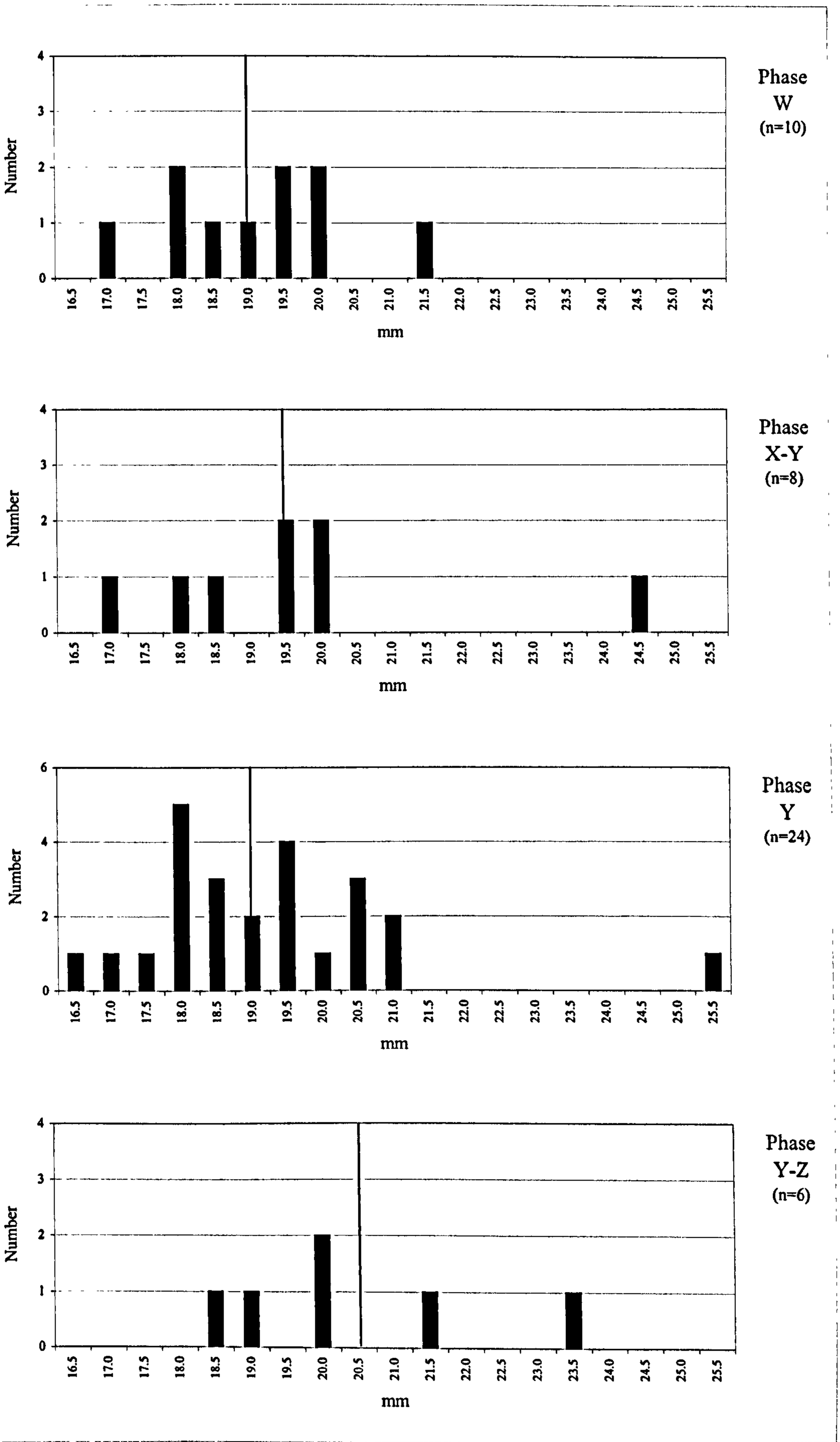


Figure 101. Pig: Biometry: Diachronic size change: Humerus heights of the trochlea constriction (HTC) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

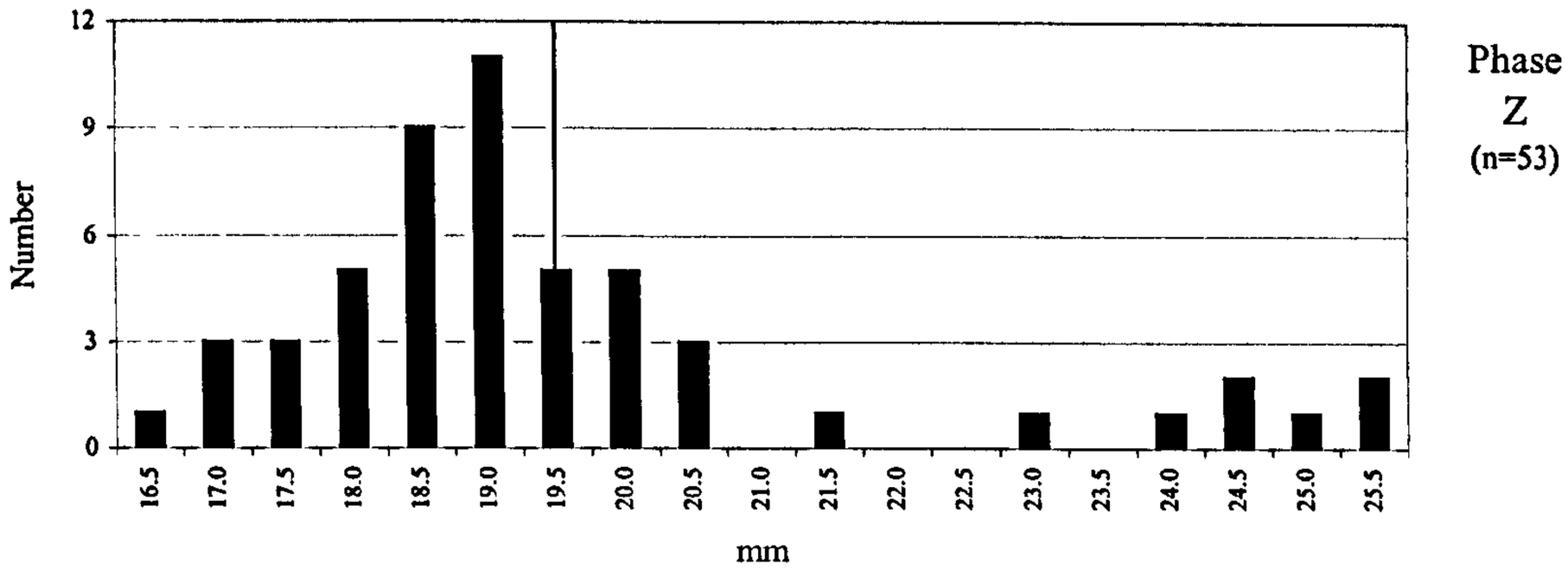


Figure 101 cont. Pig: Biometry: Diachronic size change: Humerus heights of the trochlea constriction (HTC) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

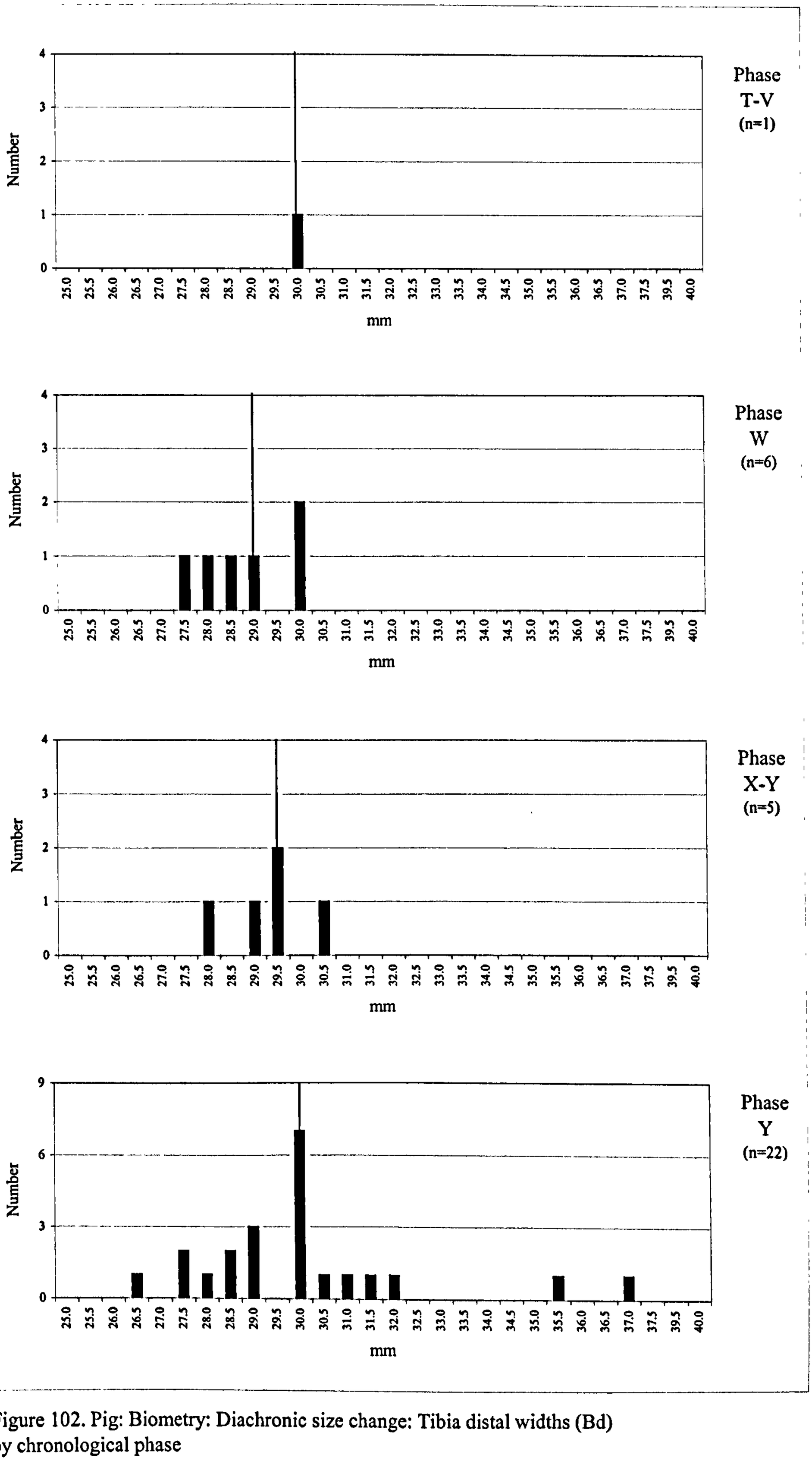


Figure 102. Pig: Biometry: Diachronic size change: Tibia distal widths (Bd) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

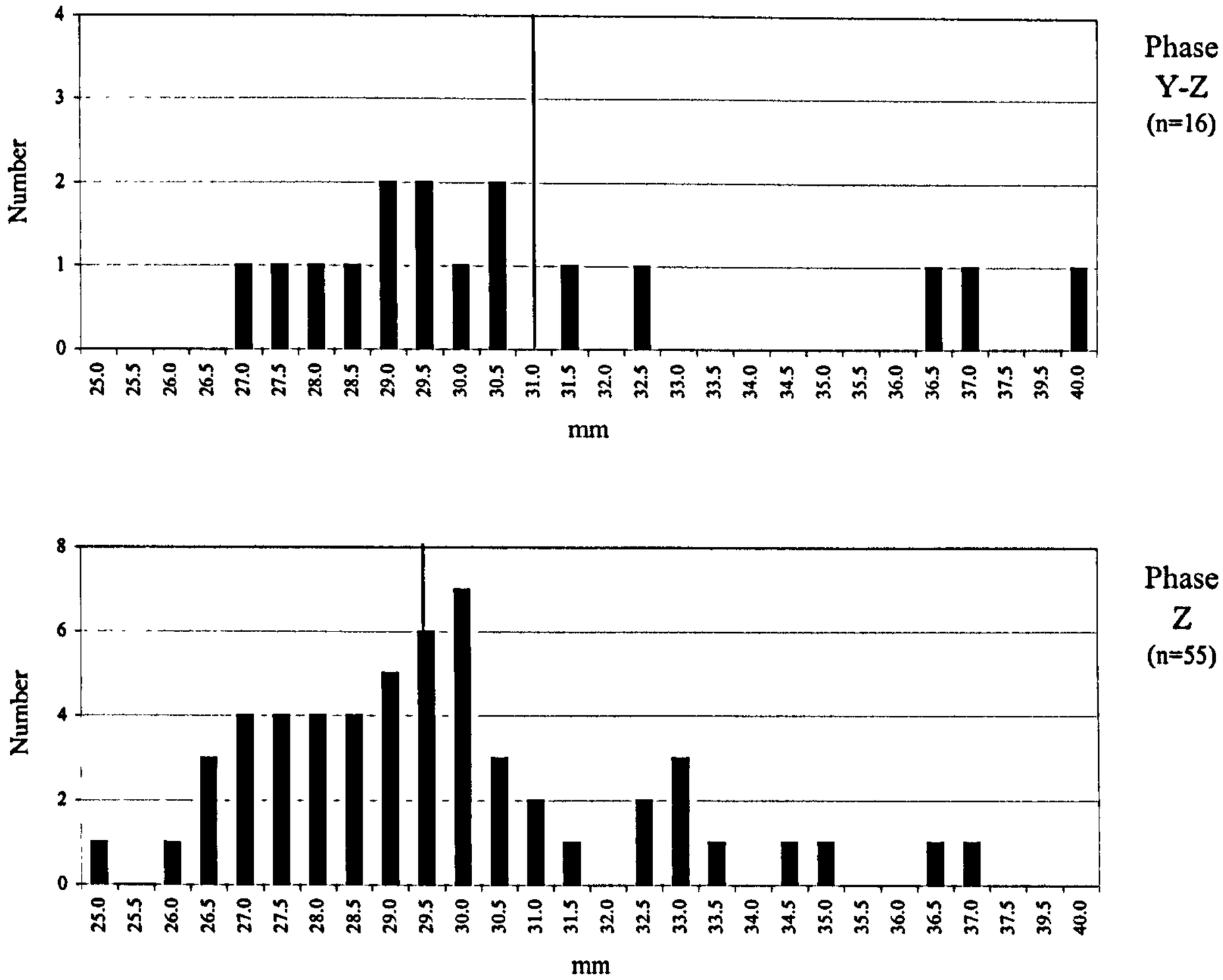


Figure 102 cont. Pig: Biometry: Diachronic size change: Tibia distal widths (Bd) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

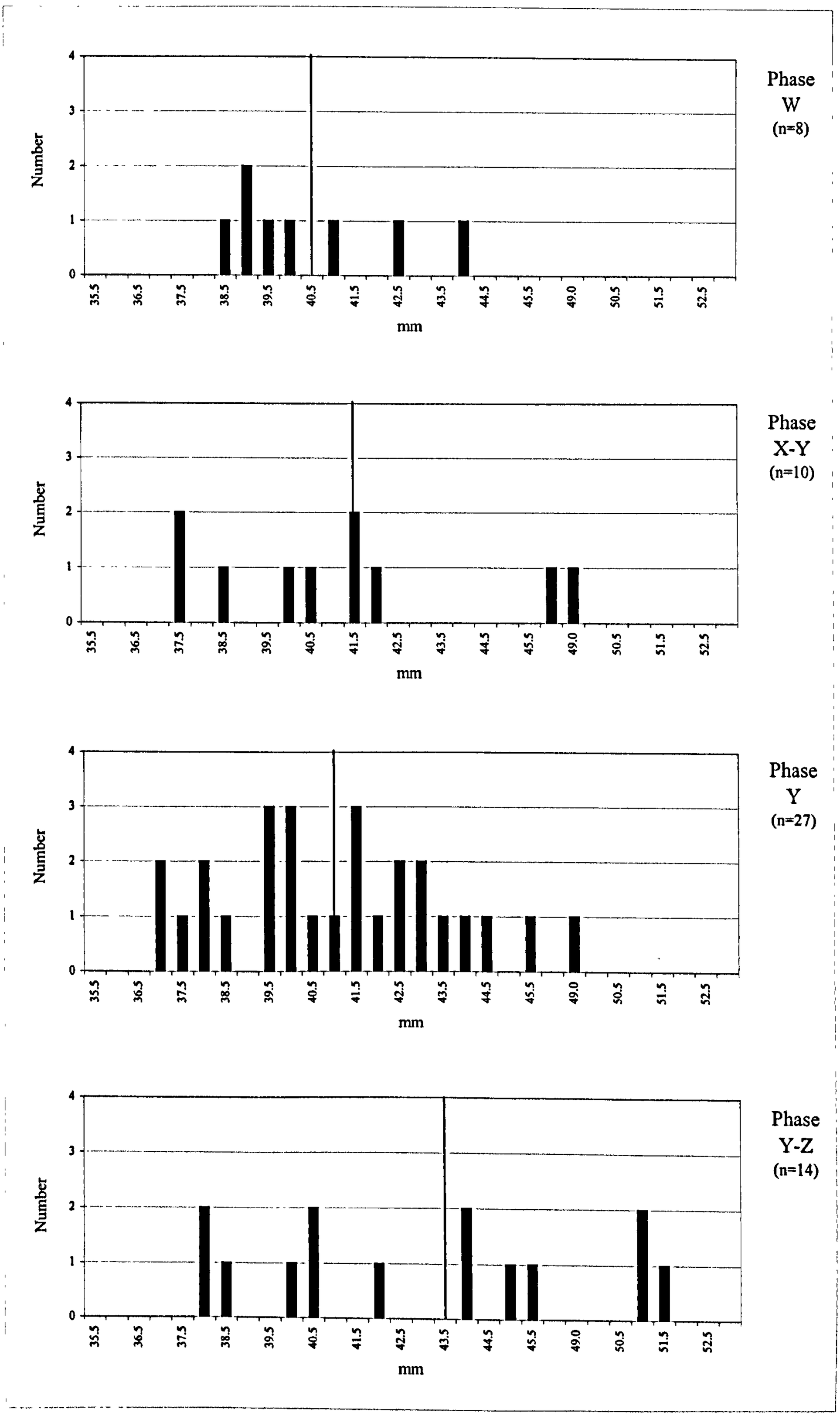


Figure 103. Pig: Biometry: Diachronic size change: Astragalus greatest lateral lengths (GLl) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

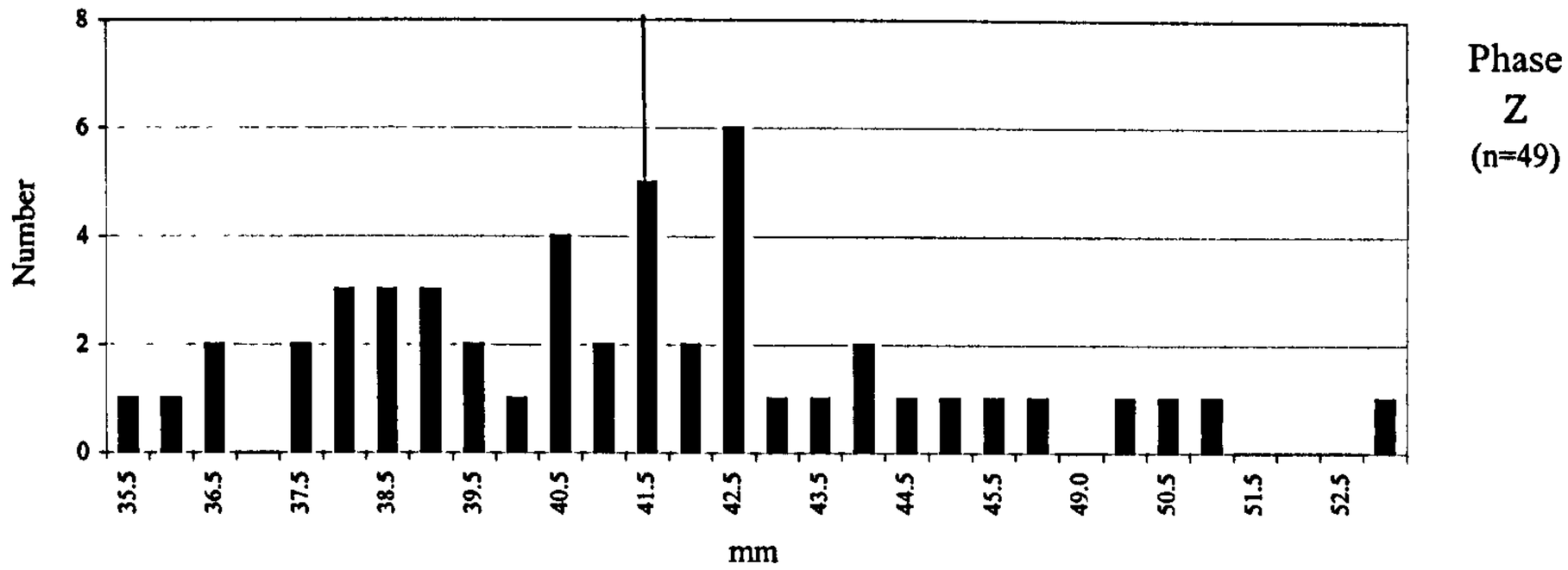


Figure 103 cont. Pig: Biometry: Diachronic size change: Astragalus greatest lateral lengths (GLl) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

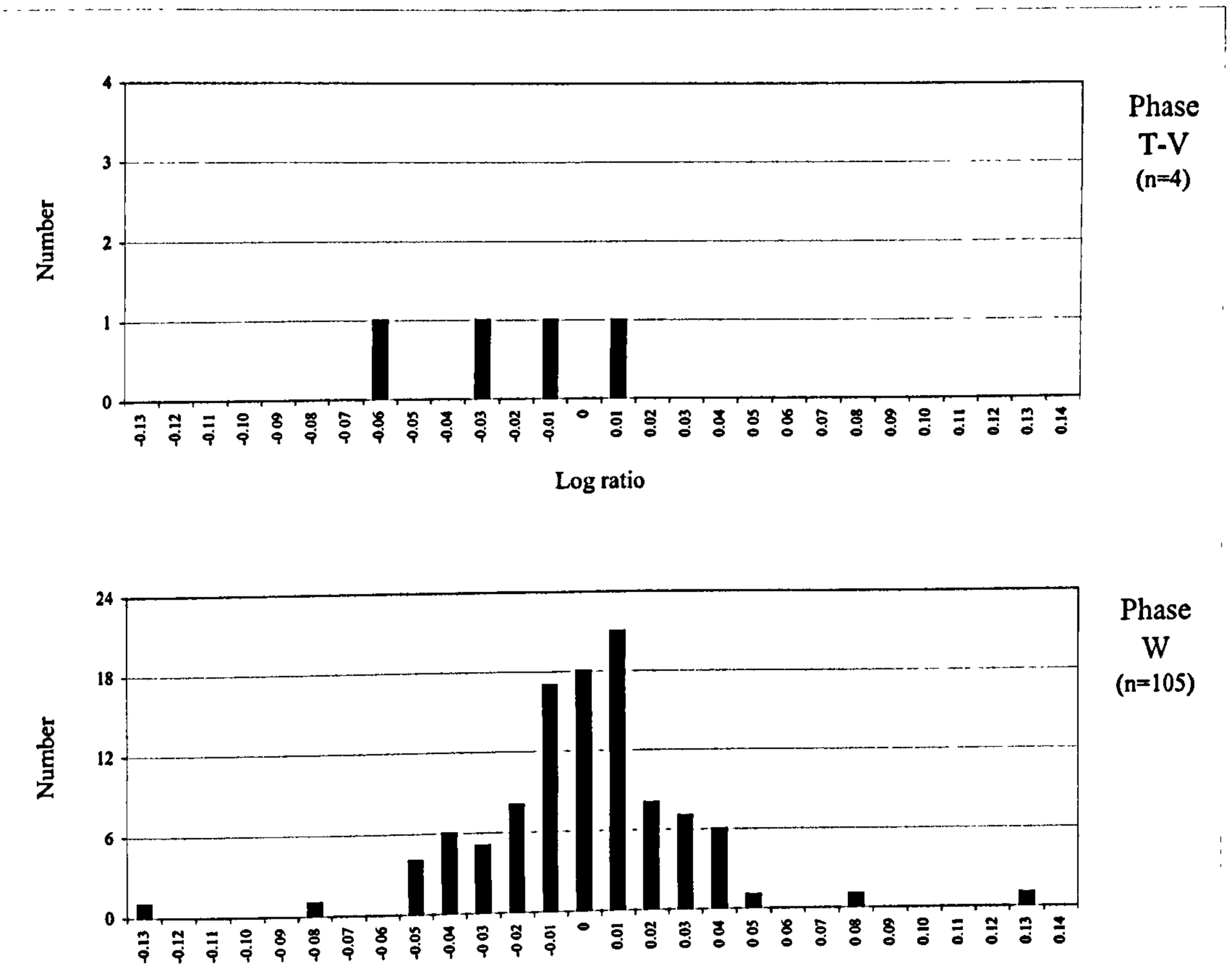


Figure 104. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* mandibular tooth widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

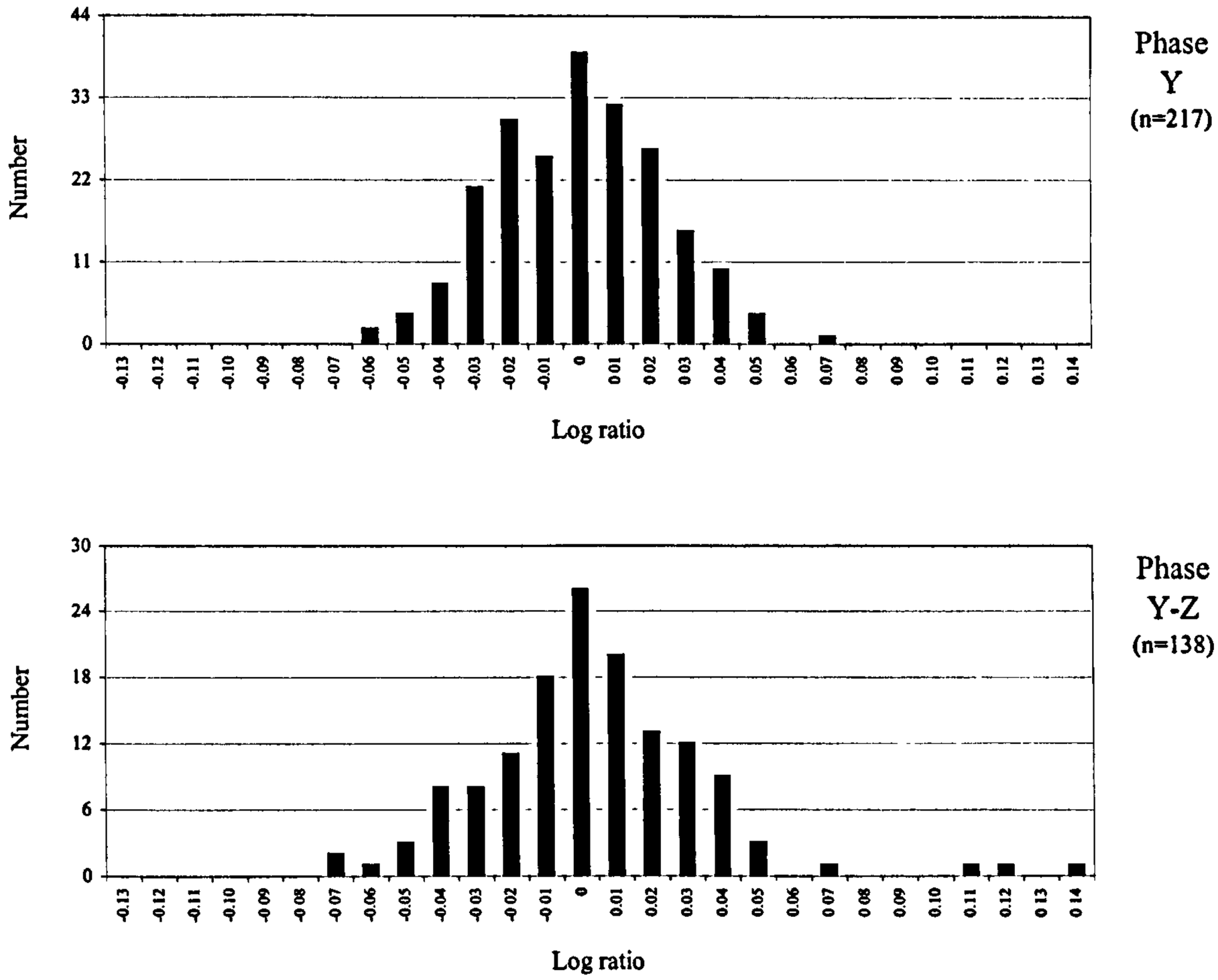


Figure 104 cont. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* mandibular tooth widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

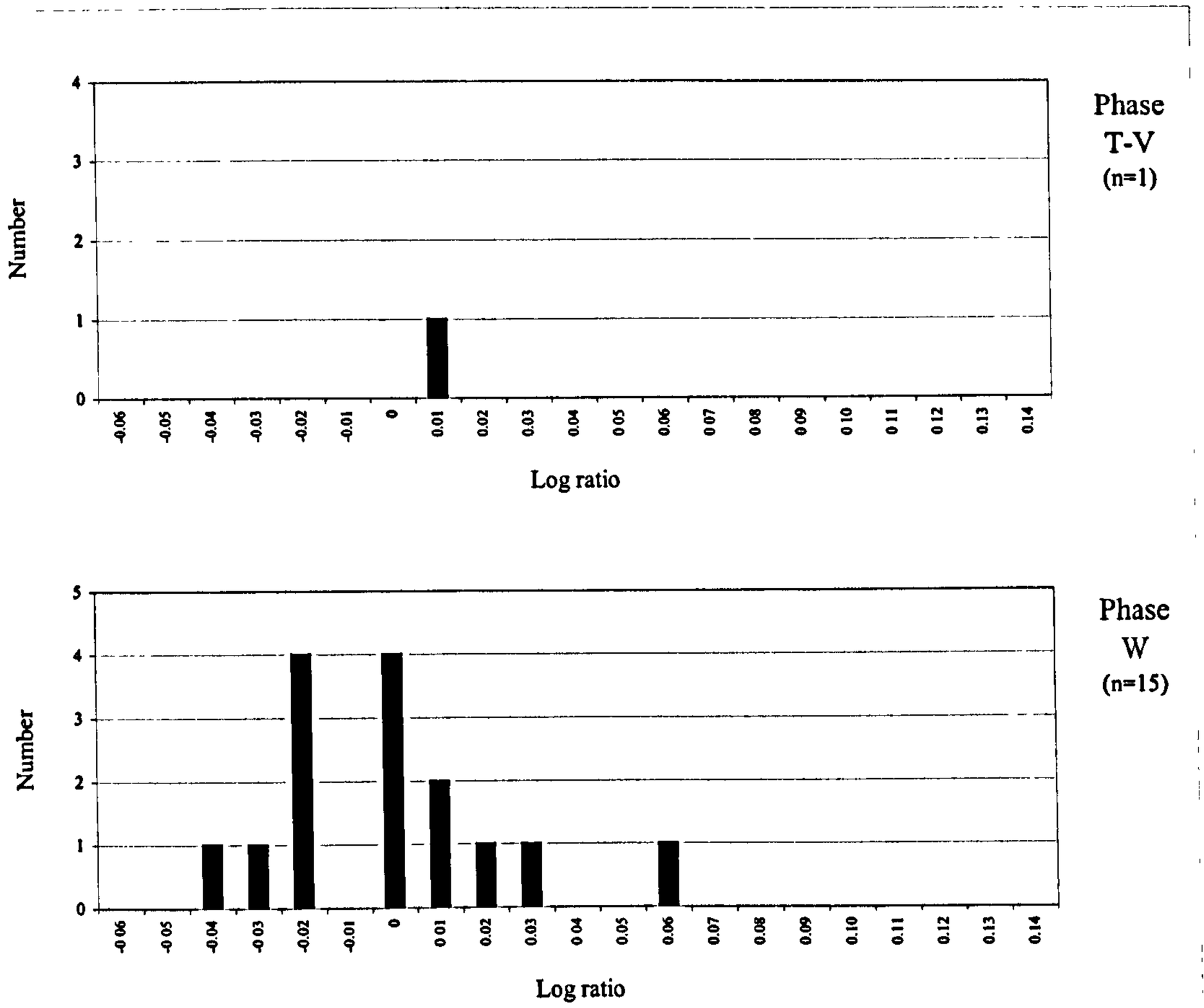


Figure 105. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* post-cranial widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

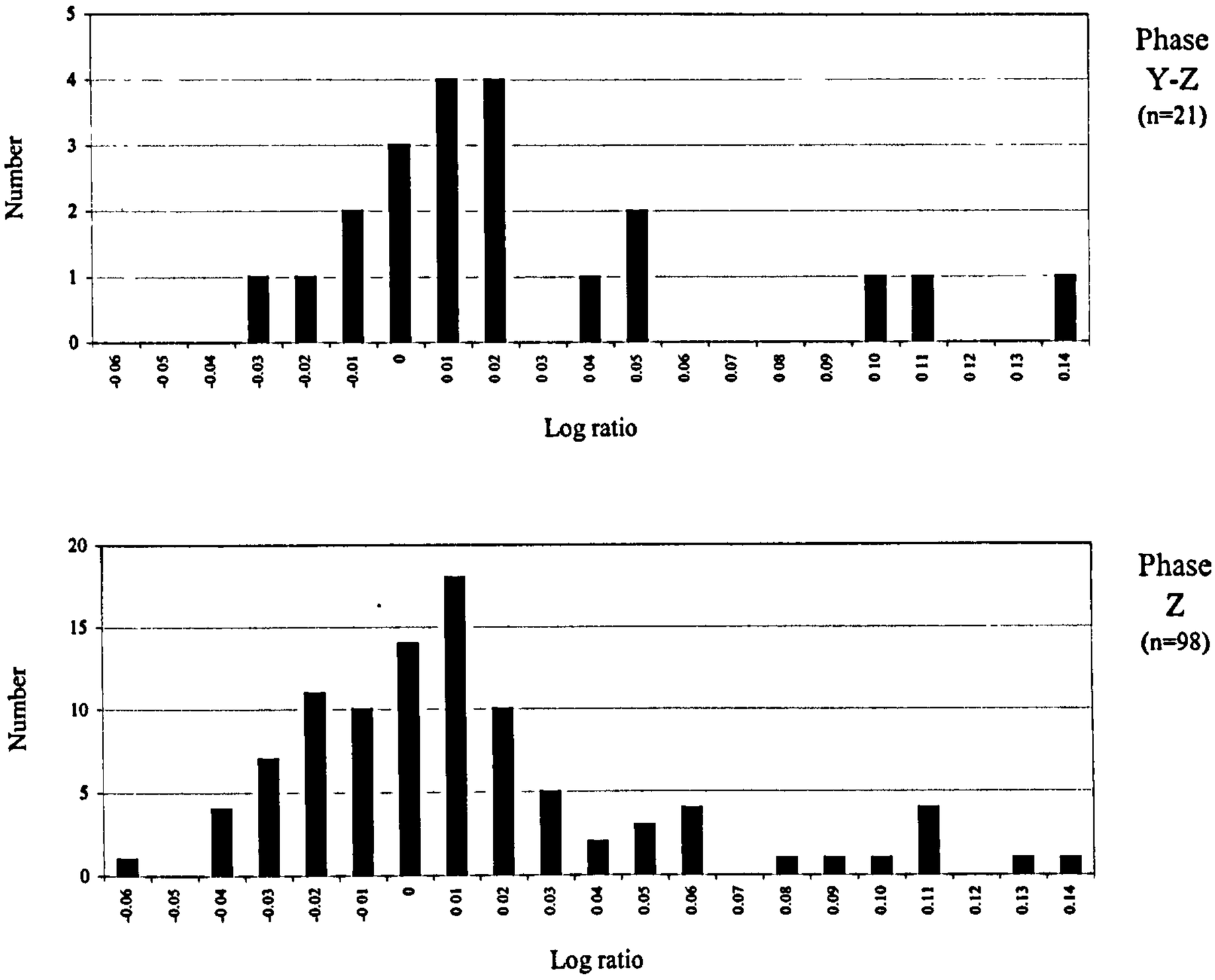


Figure 105 cont. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* post-cranial widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

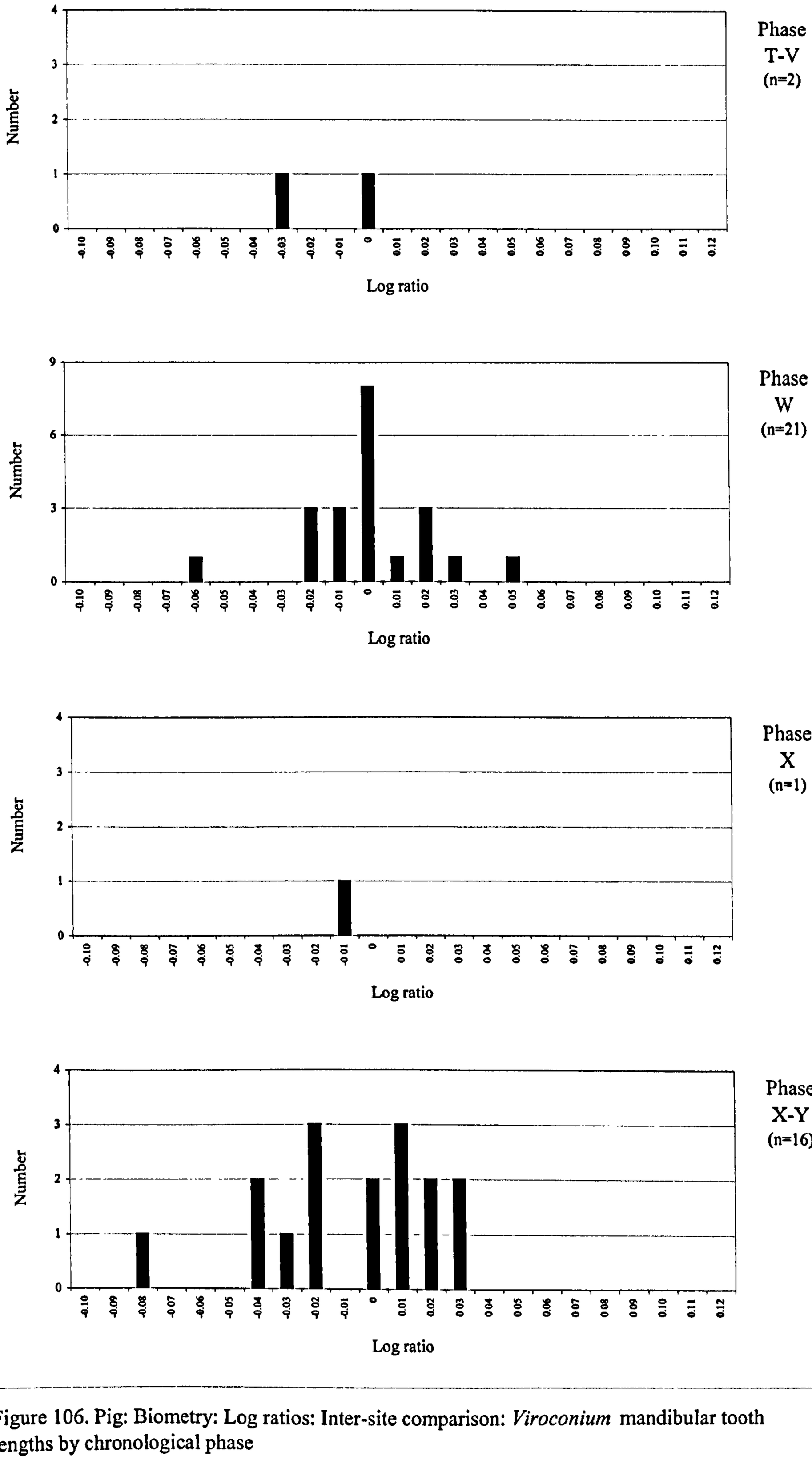


Figure 106. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* mandibular tooth lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

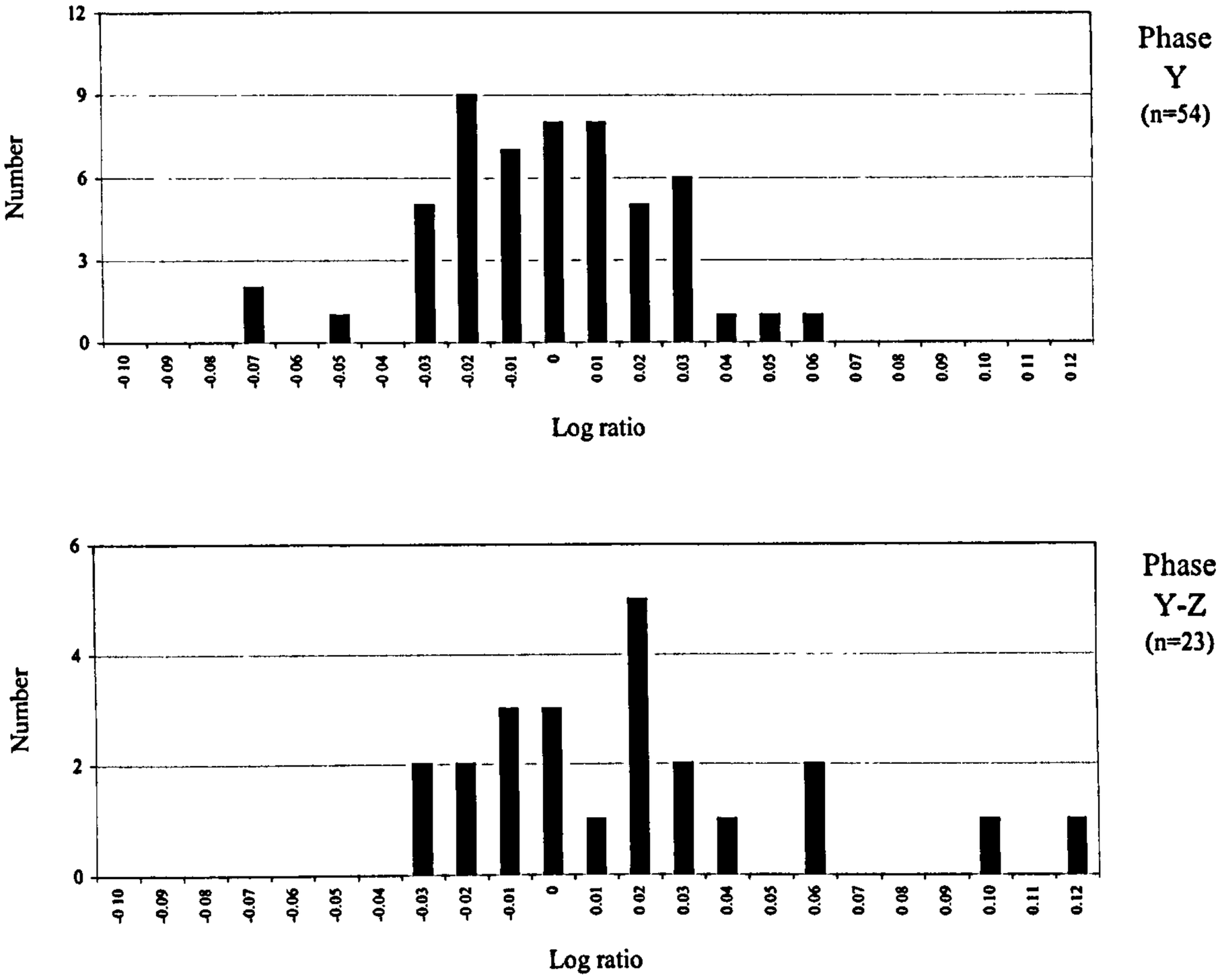


Figure 106 cont. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* mandibular tooth lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

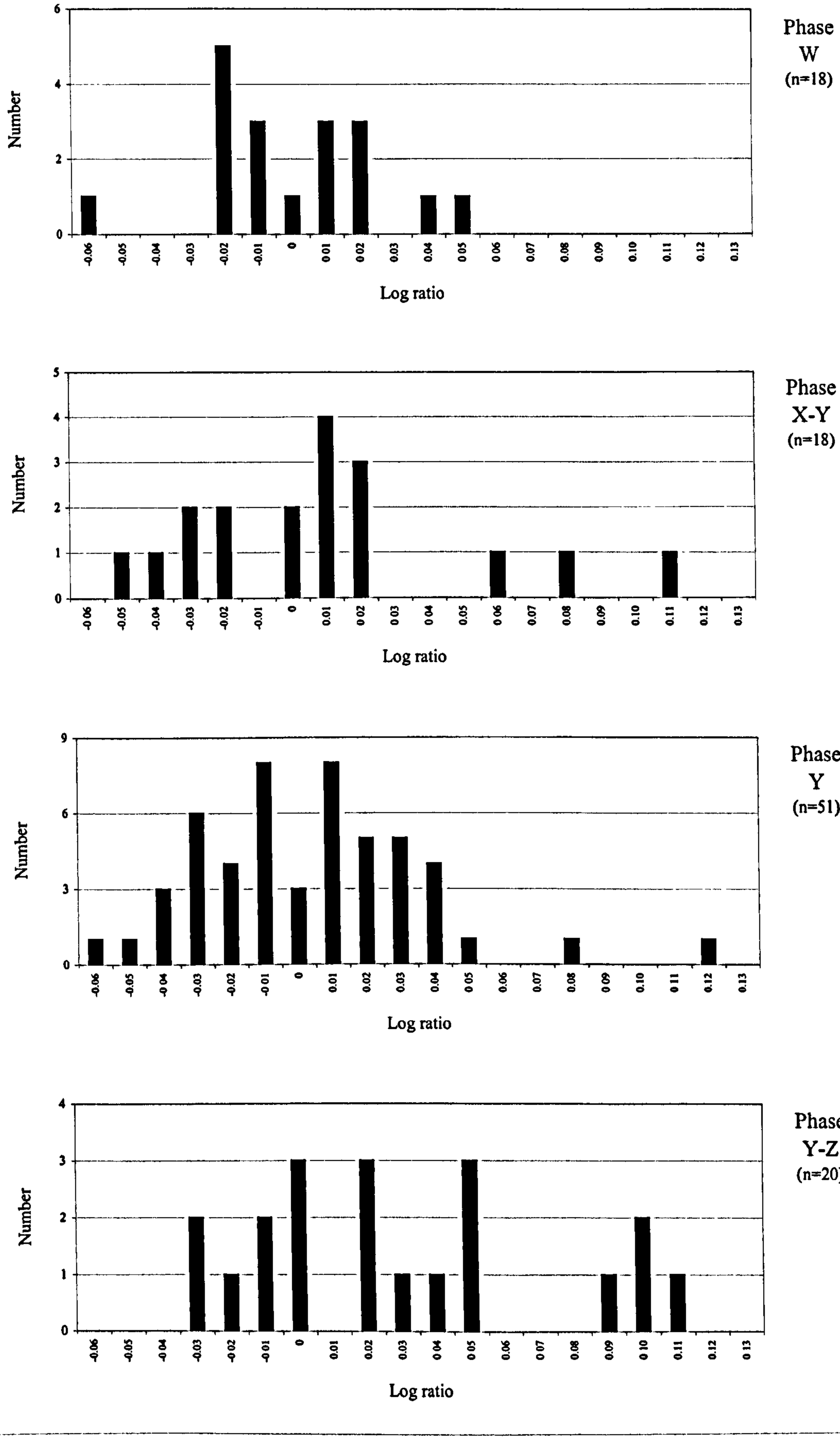


Figure 107. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* post-cranial lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

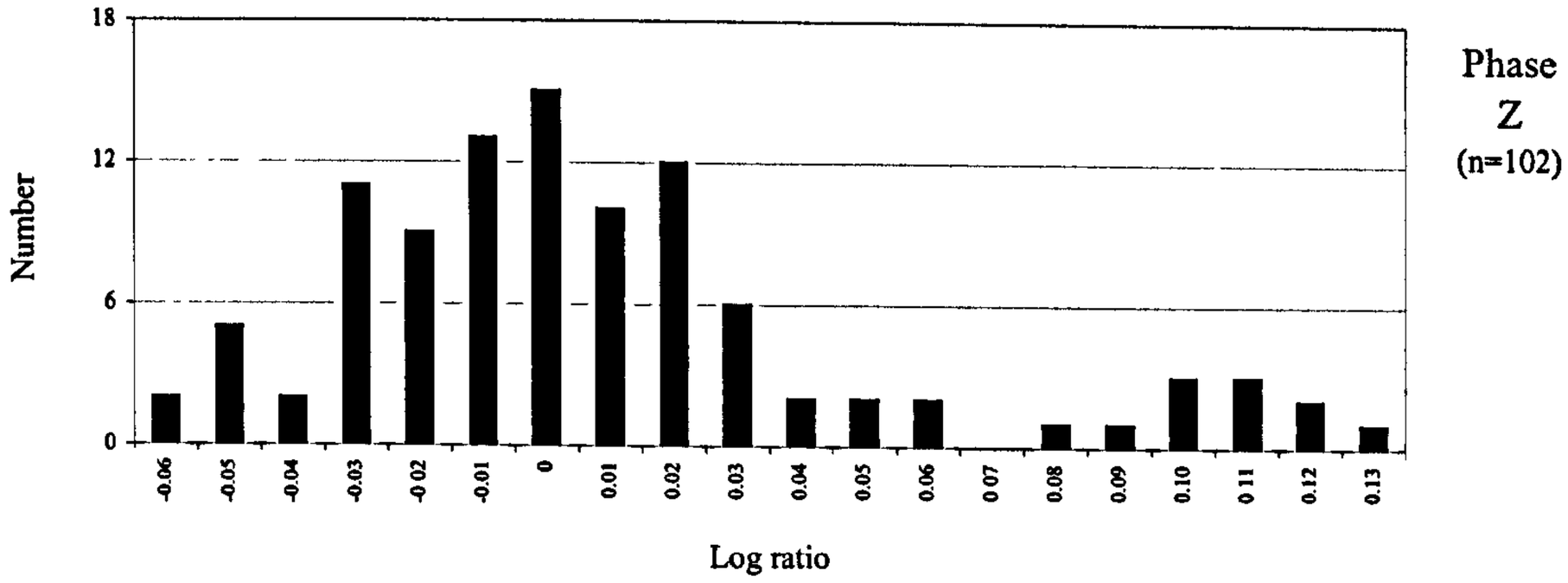


Figure 107 cont. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* post-cranial lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

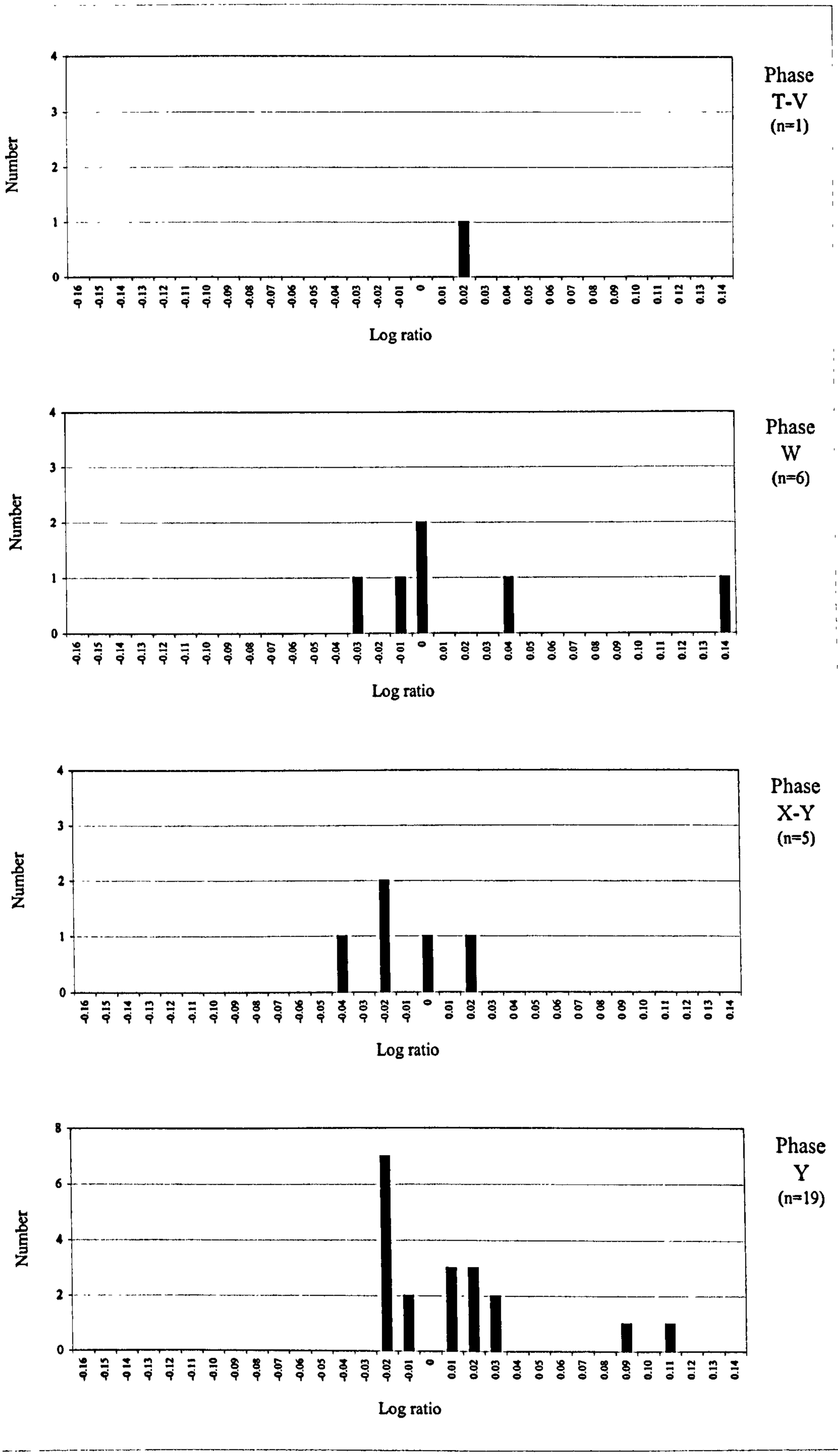


Figure 108. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* post-cranial depths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

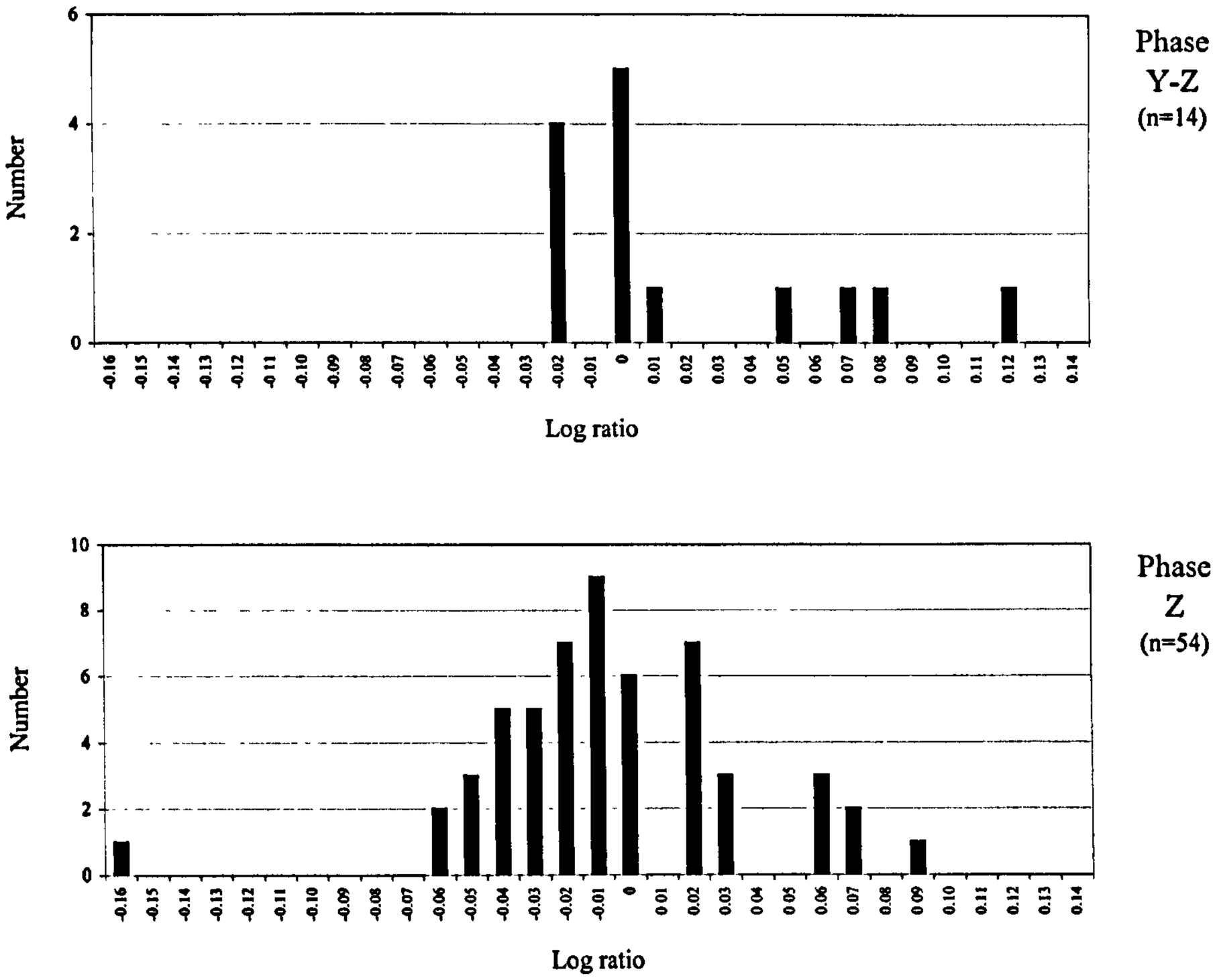


Figure 108 cont. Pig: Biometry: Log ratios: Inter-site comparison: *Viroconium* post-cranial depths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

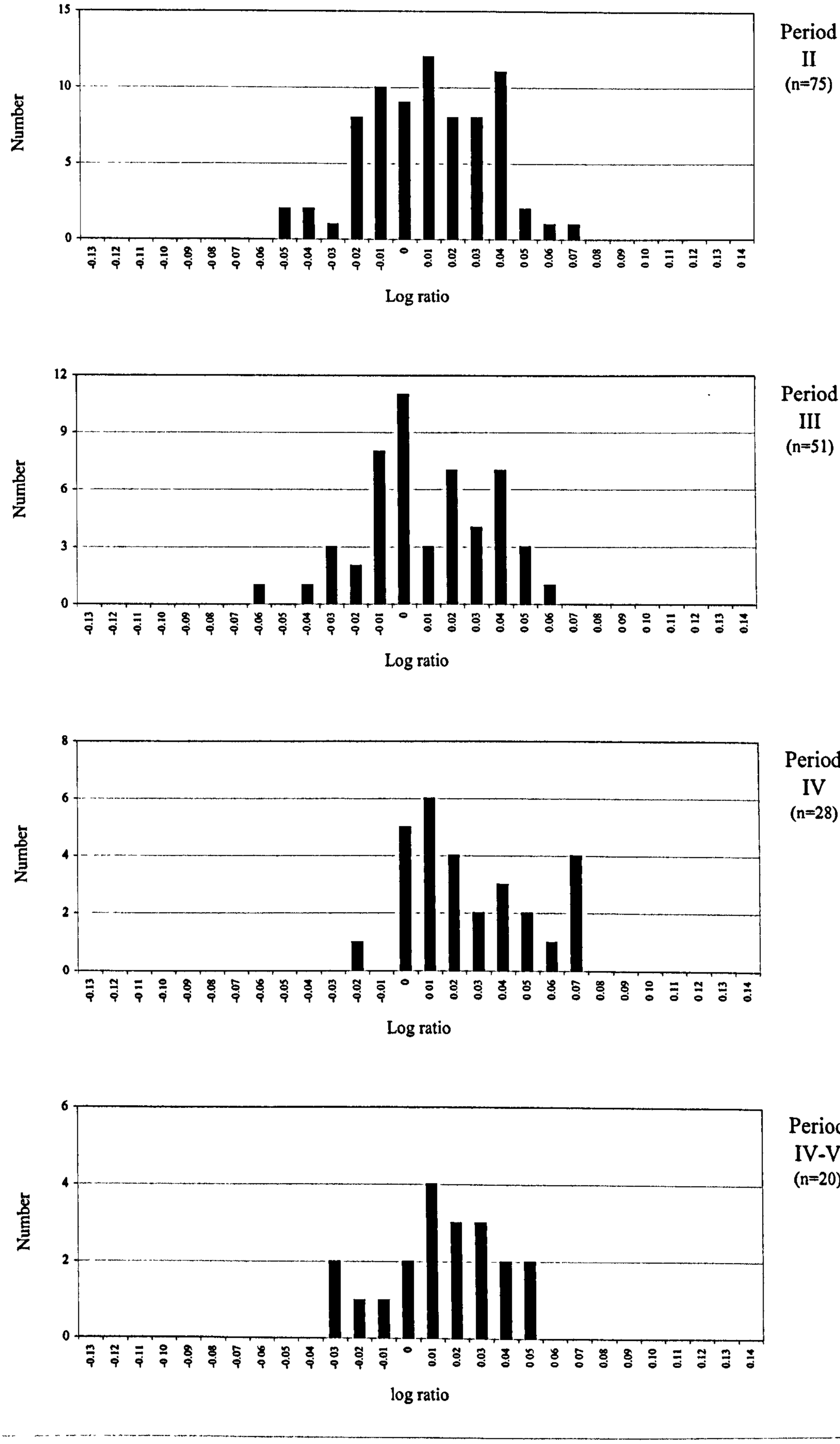


Figure 109. Pig: Biometry: Log ratios: Inter-site comparison: Elms Farm mandibular tooth widths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

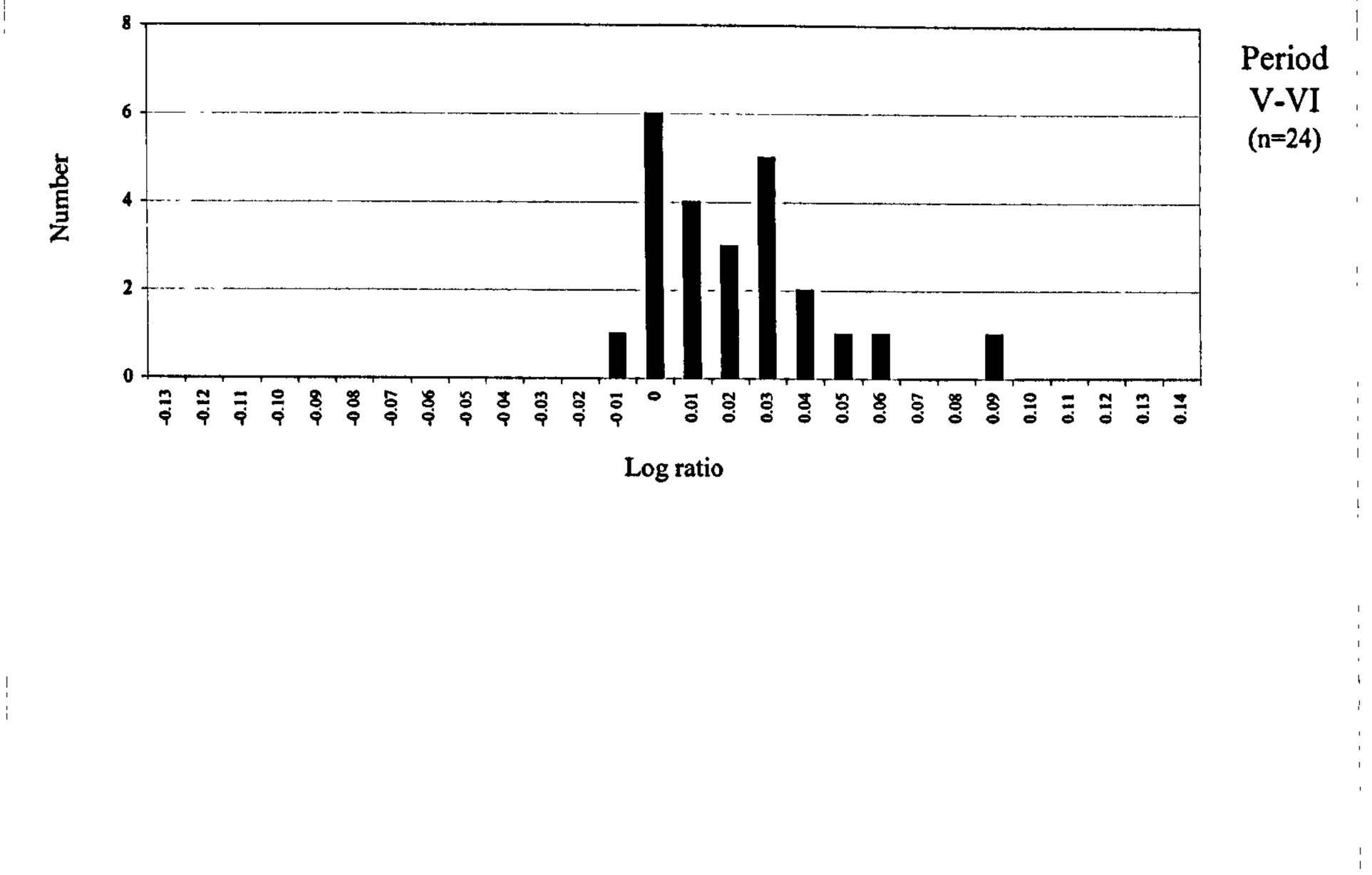


Figure 109 cont. Pig: Biometry: Log ratios: Inter-site comparison: Elms Farm mandibular tooth widths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

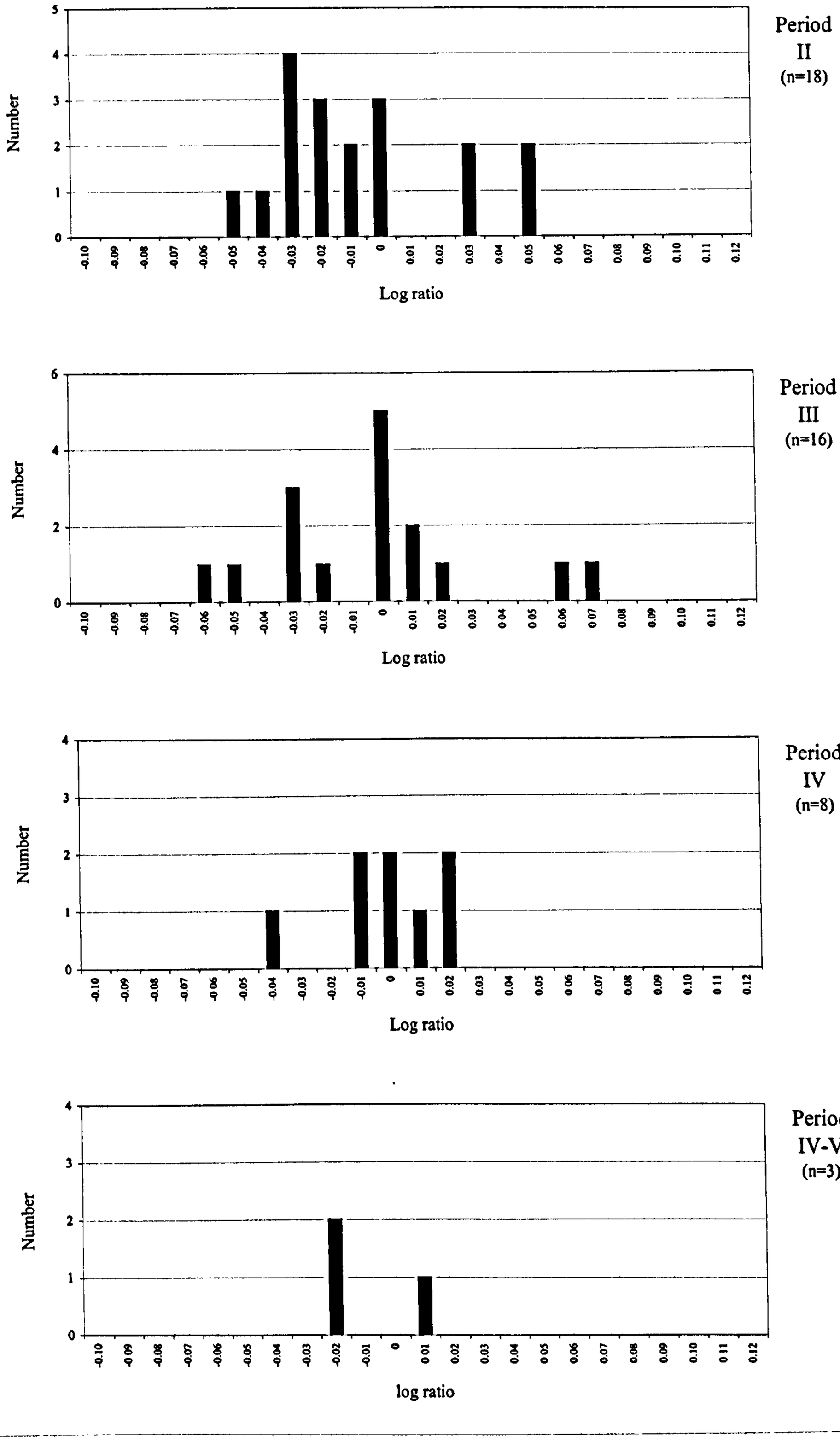


Figure 110. Pig: Biometry: Log ratios: Inter-site comparison: Elms Farm mandibular tooth lengths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

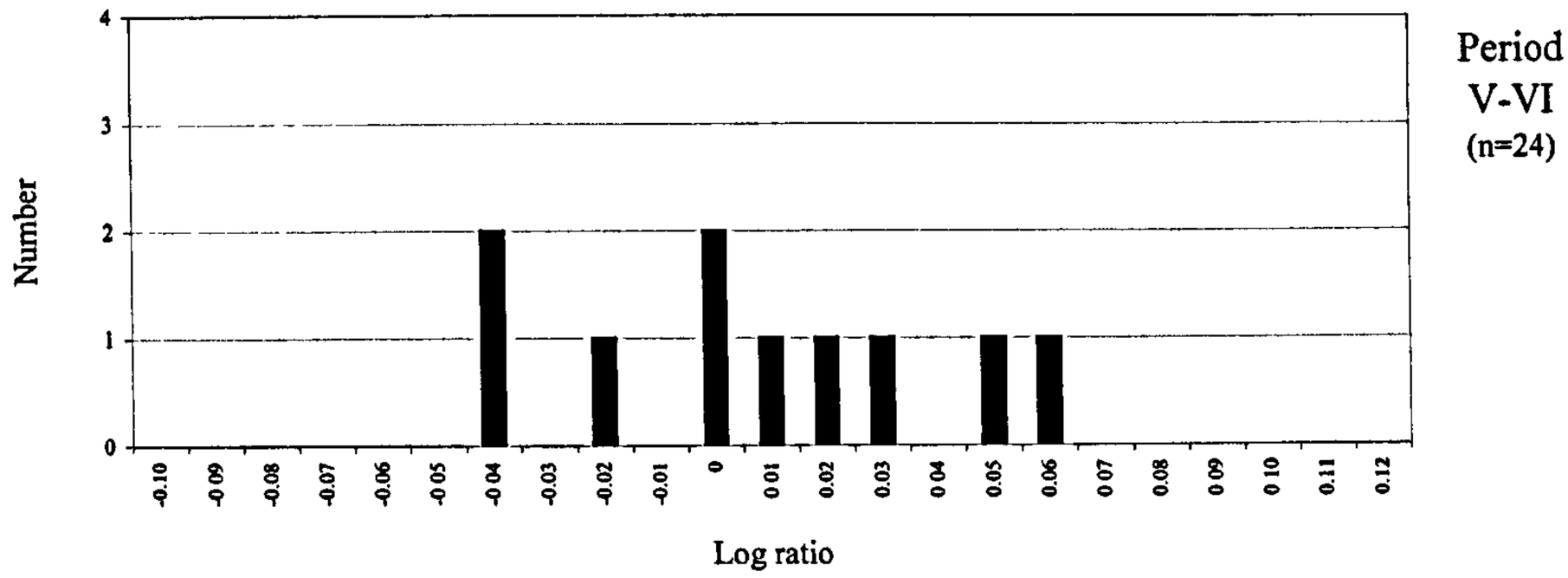


Figure 110 cont. Pig: Biometry: Log ratios: Inter-site comparison: Elms Farm mandibular tooth lengths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

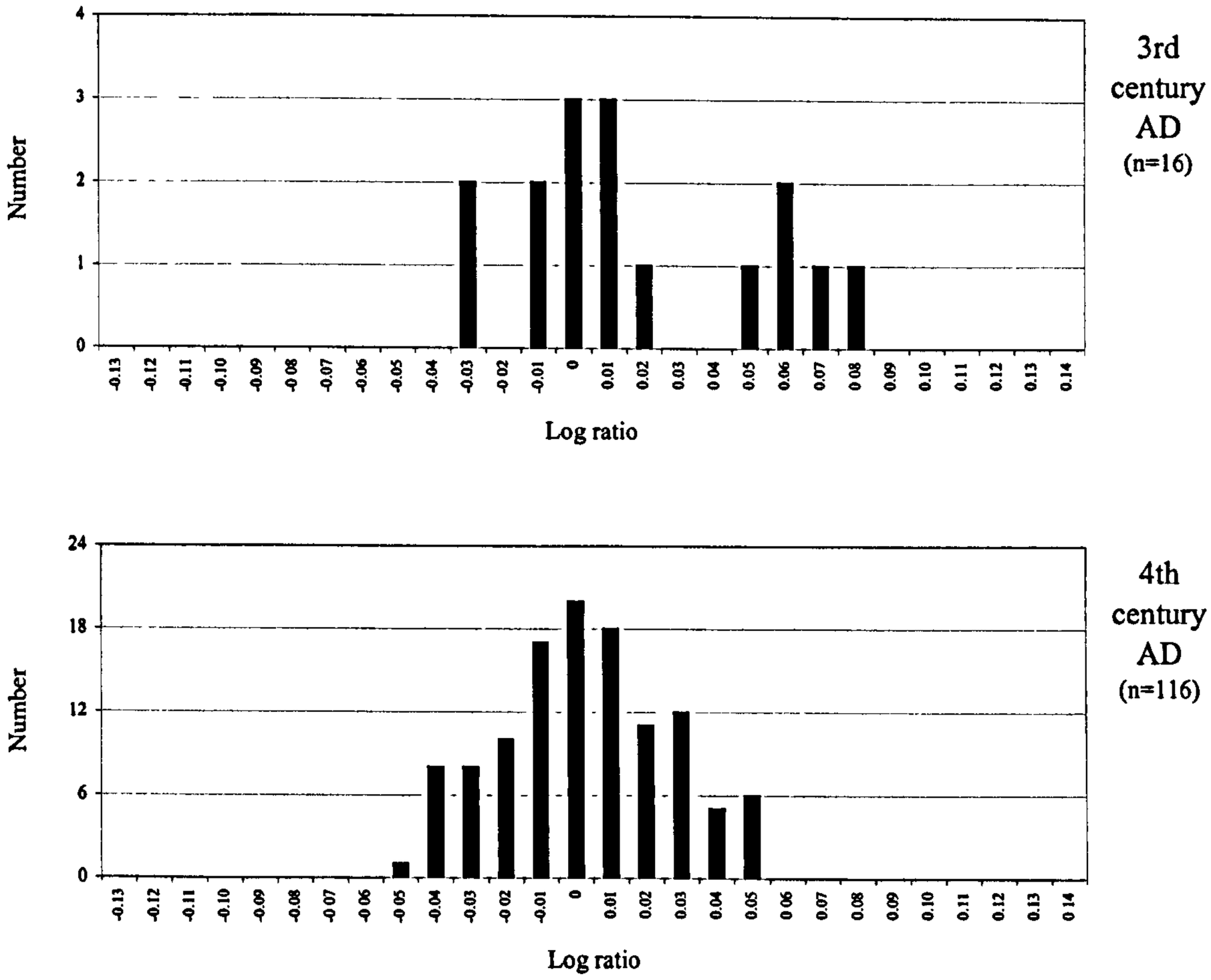


Figure 111. Pig: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln mandibular tooth widths (Dobney *et al*. 1996: 192-193, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

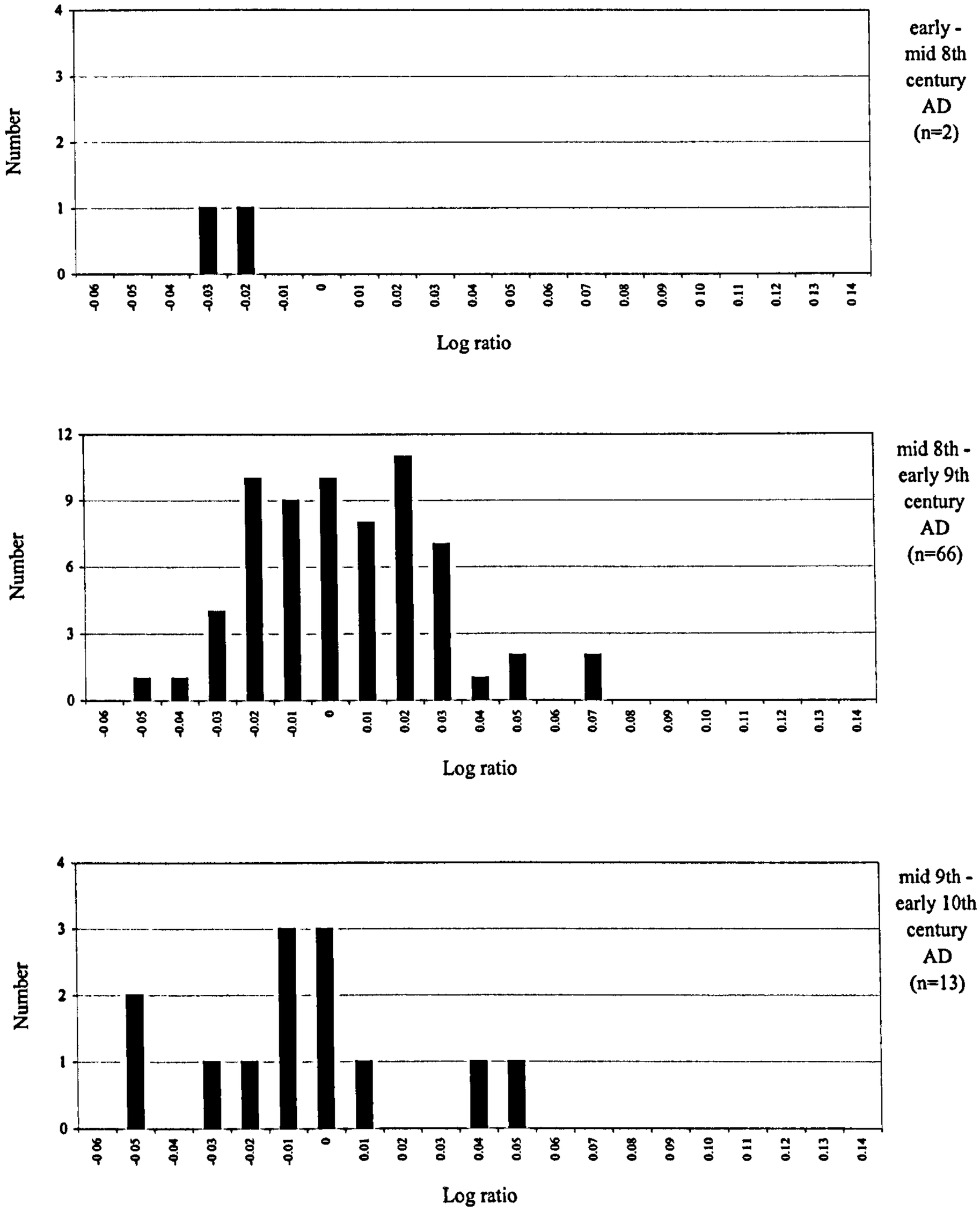


Figure 112. Pig: Biometry: Log ratios: Inter-site comparison: Six Dials post-cranial widths by phase (Andrews 1997: 13-14; Bourdillon & Andrews 1997: 242; University of Southampton 2003)

NB. '0' represents the standard value: *Viroconium* Phase W average

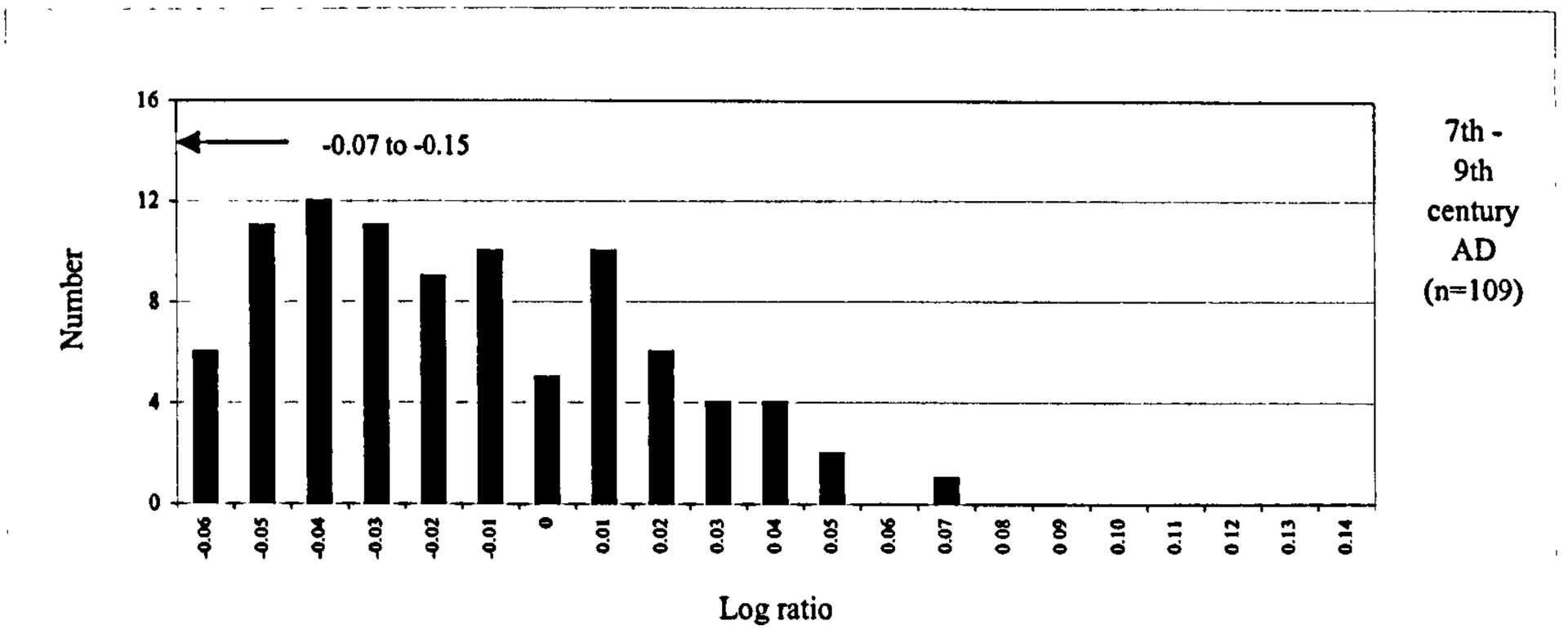


Figure 113. Pig: Biometry: Log ratios: Inter-site comparison: 7th - 9th century AD Maiden Lane post-cranial widths (West 1988; University of Southampton 2003)

NB. '0' represents the standard value: *Viroconium* Phase W average

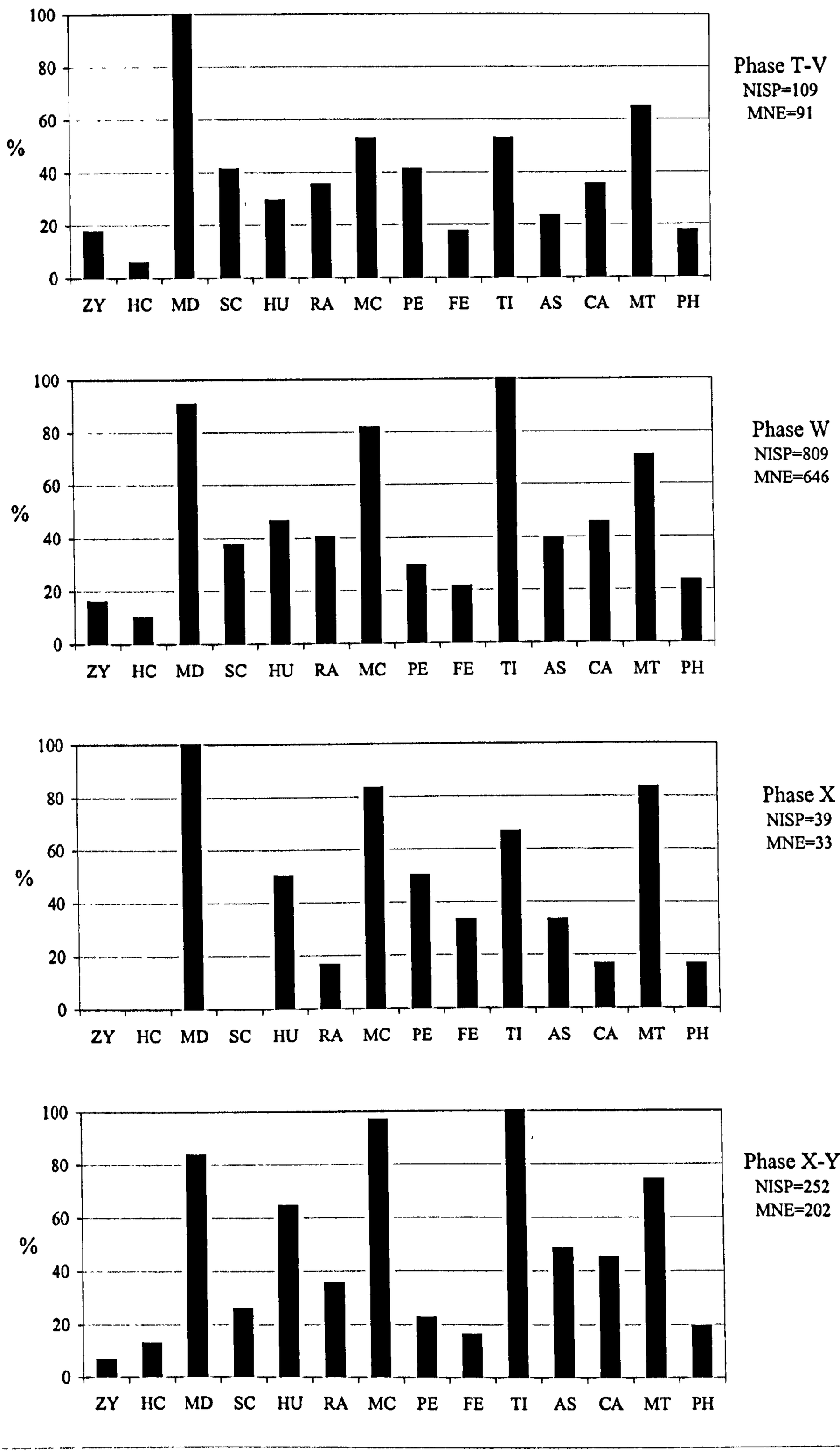


Figure 114. Sheep/goat: Anatomical representation: MNE by chronological phase expressed as %MNI

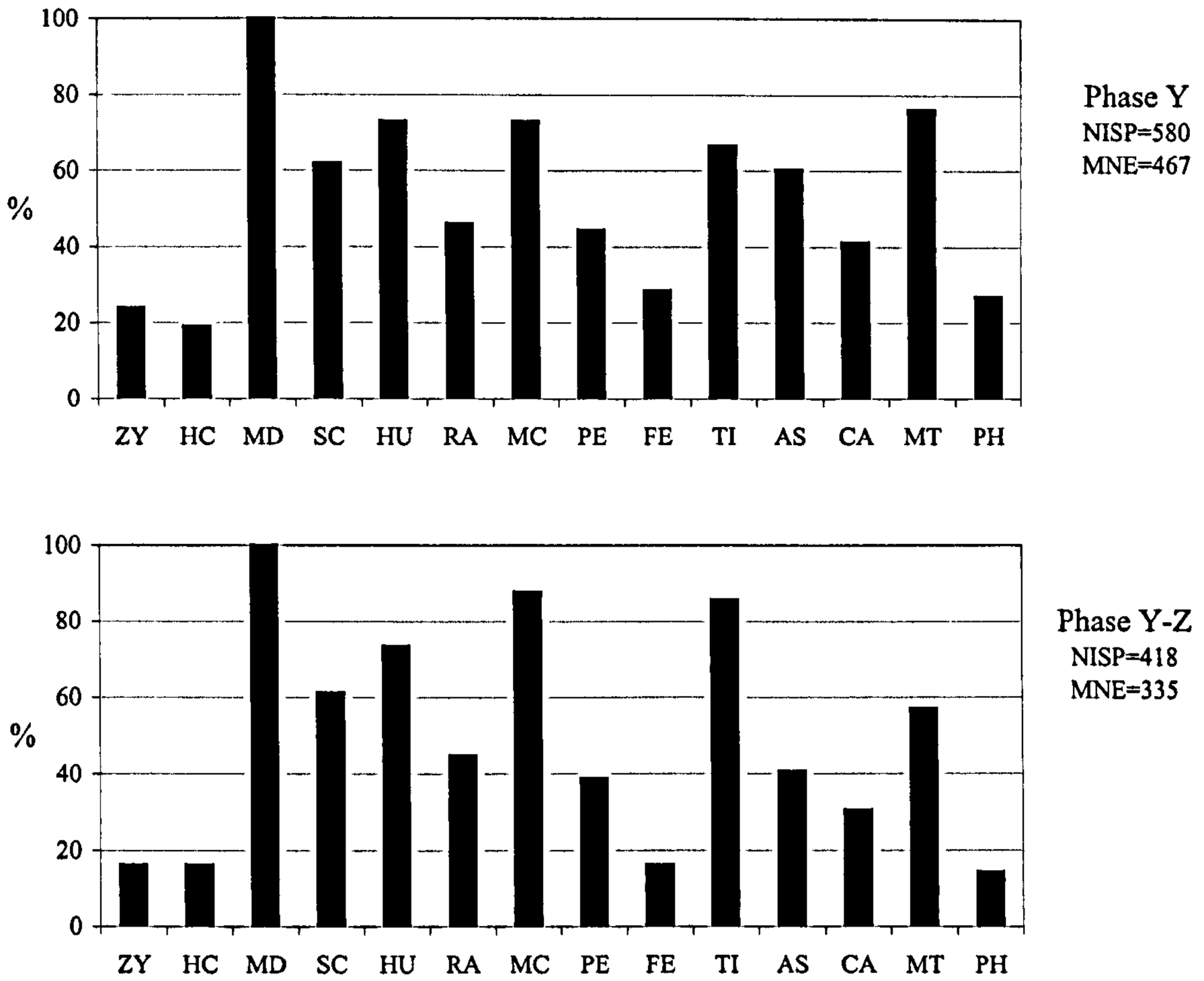


Figure 114 cont. Sheep/goat: Anatomical representation: MNE by chronological phase expressed as %MNI

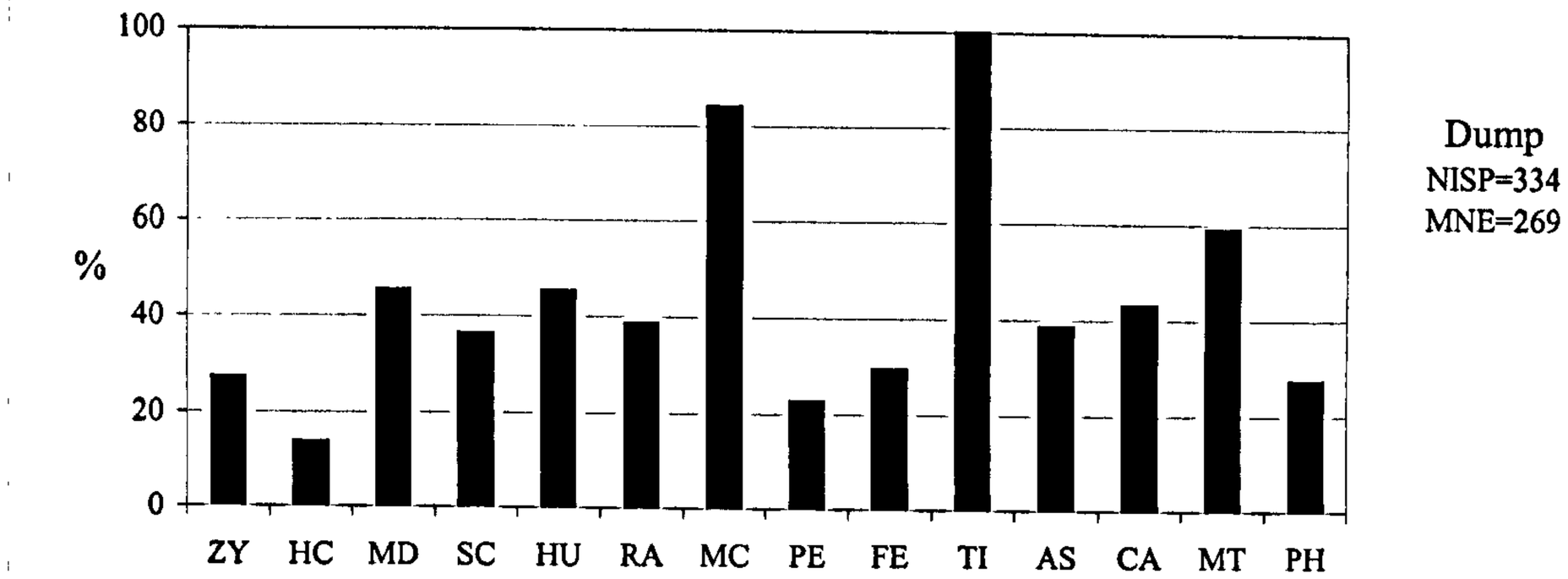


Figure 115. Sheep/goat: Anatomical representation: Phase W: MNE by feature type expressed as %MNI

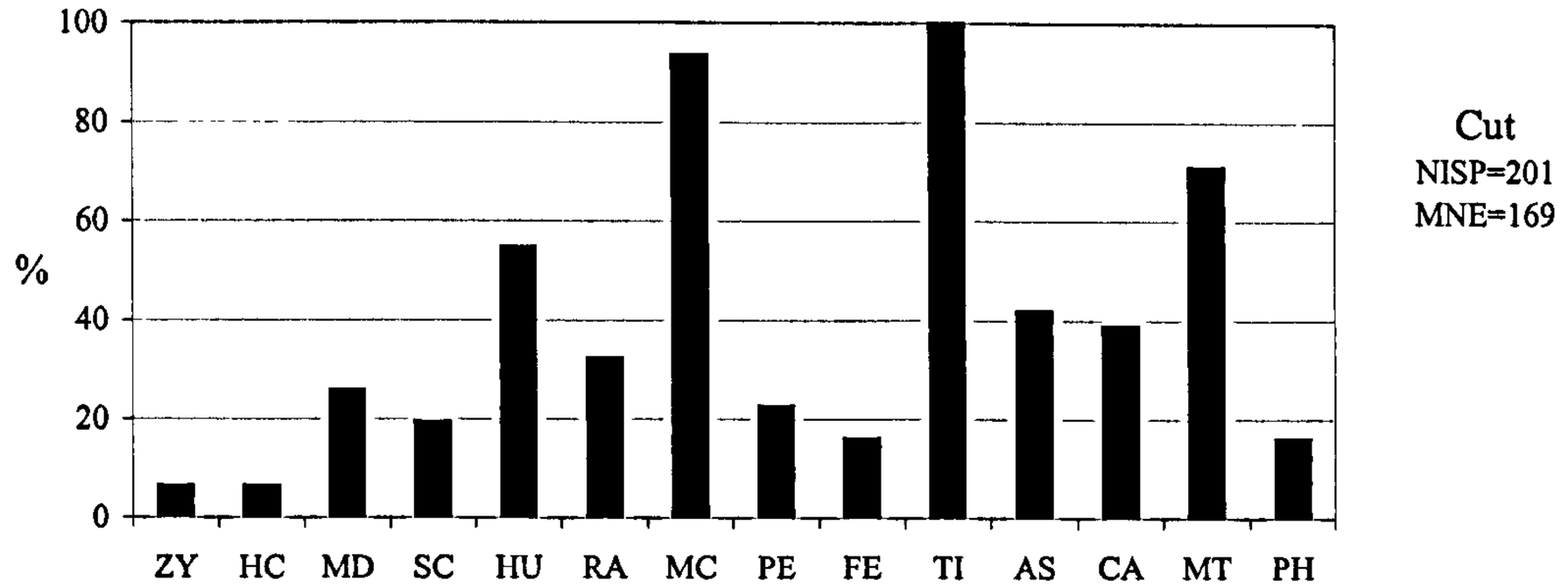


Figure 116. Sheep/goat: Anatomical representation: Phase X-Y: MNE by feature type expressed as %MNI

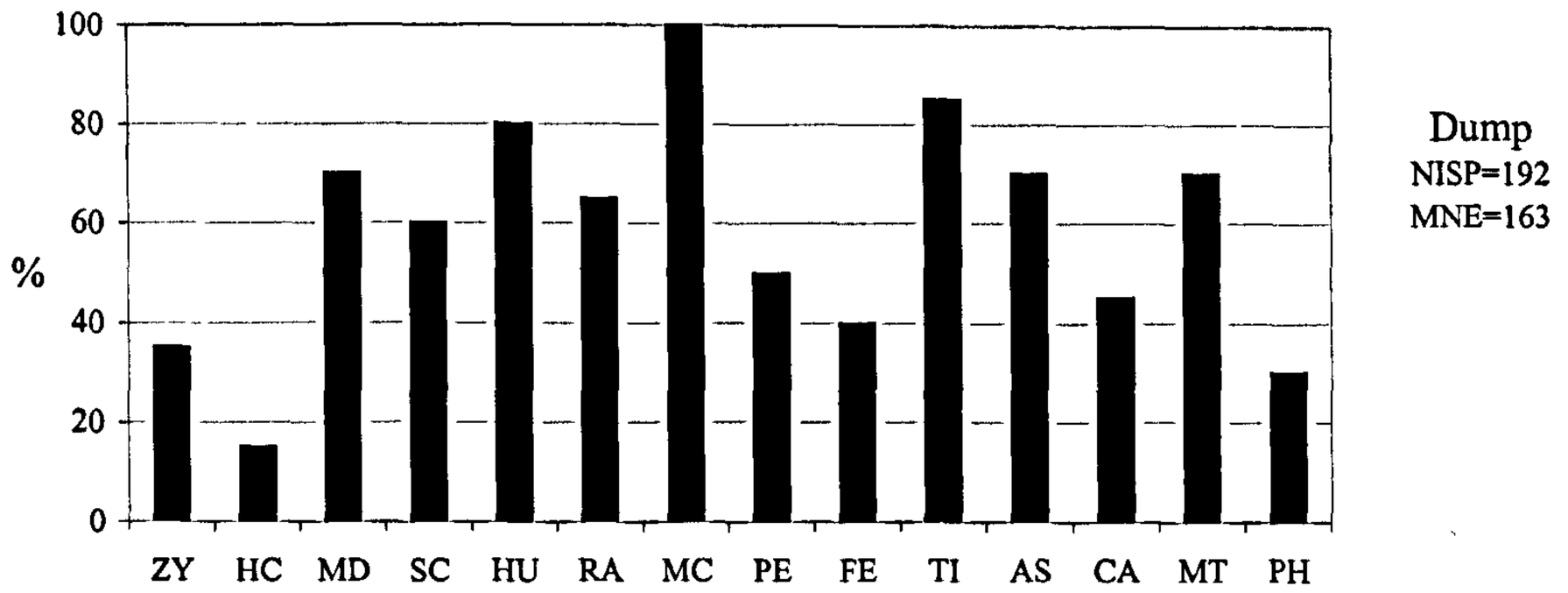


Figure 117. Sheep/goat: Anatomical representation: Phase Y: MNE by feature type expressed as %MNI

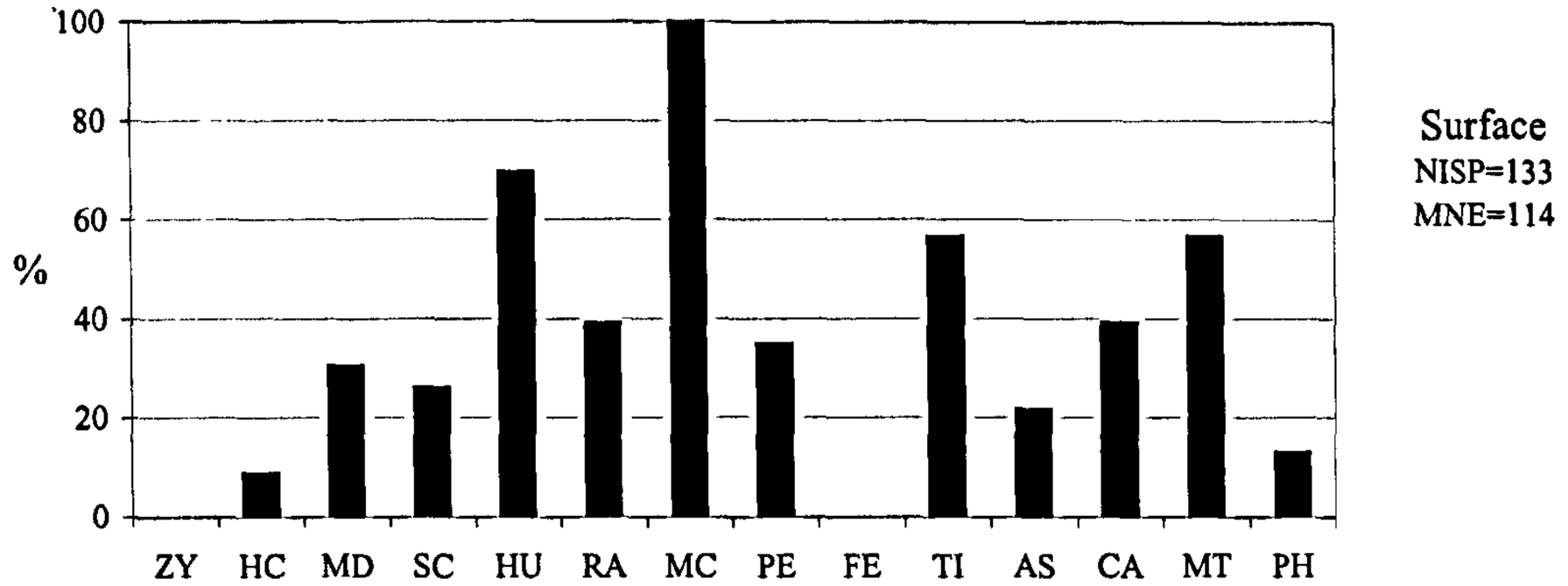


Figure 118. Sheep/goat: Anatomical representation: Phase Y-Z: MNE by feature type expressed as %MNI

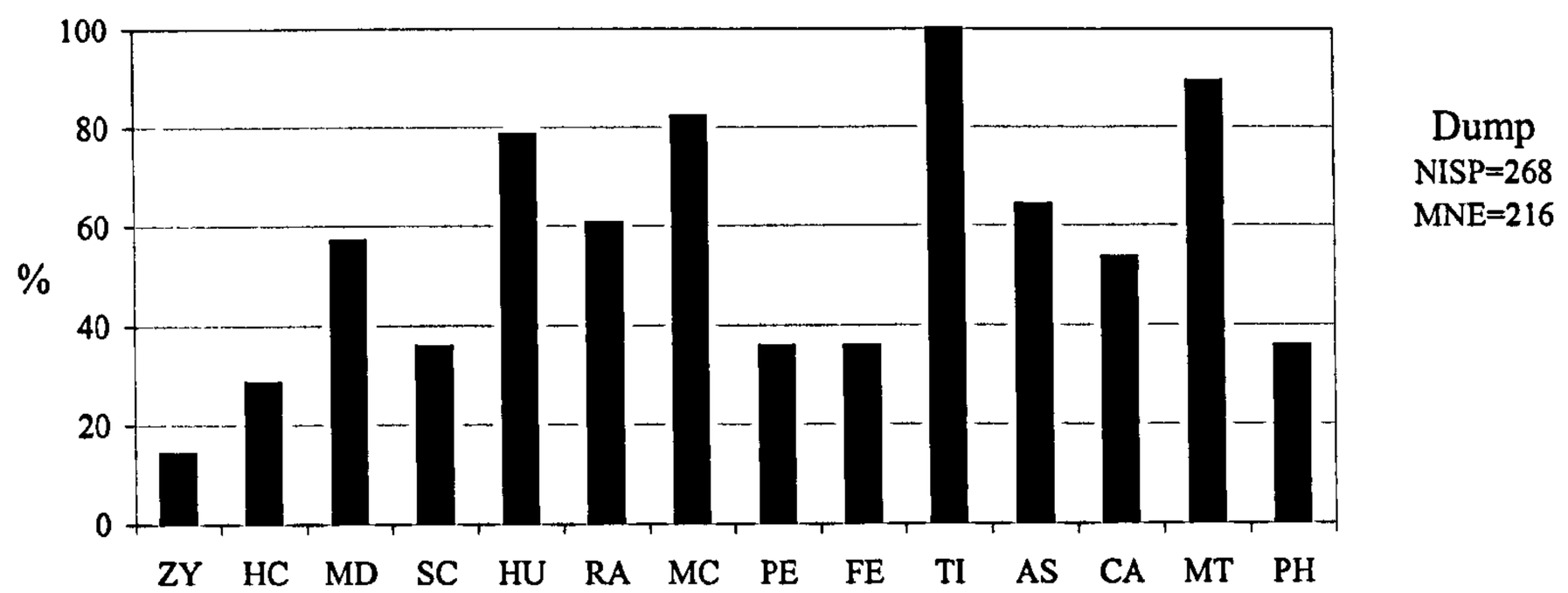


Figure 119. Sheep/goat: Anatomical representation: Phase Z: MNE by feature type expressed as %MNI

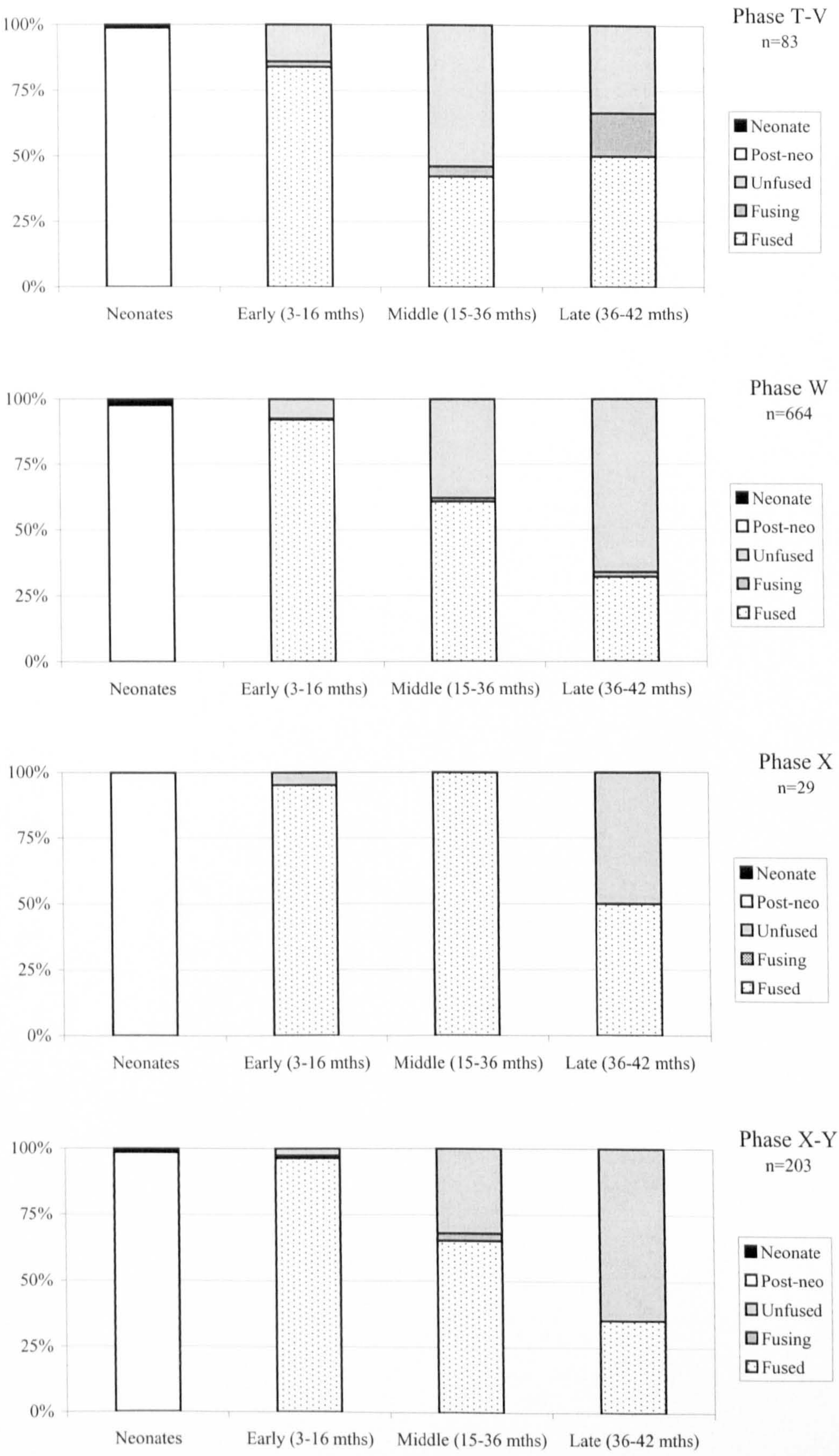


Figure 120. Sheep/goat: Mortality profiles: Post-cranial epiphyseal fusion by chronological phase, based on Schmid (1972: 75, Table 9) and Silver (1969: 252-253, Table A)

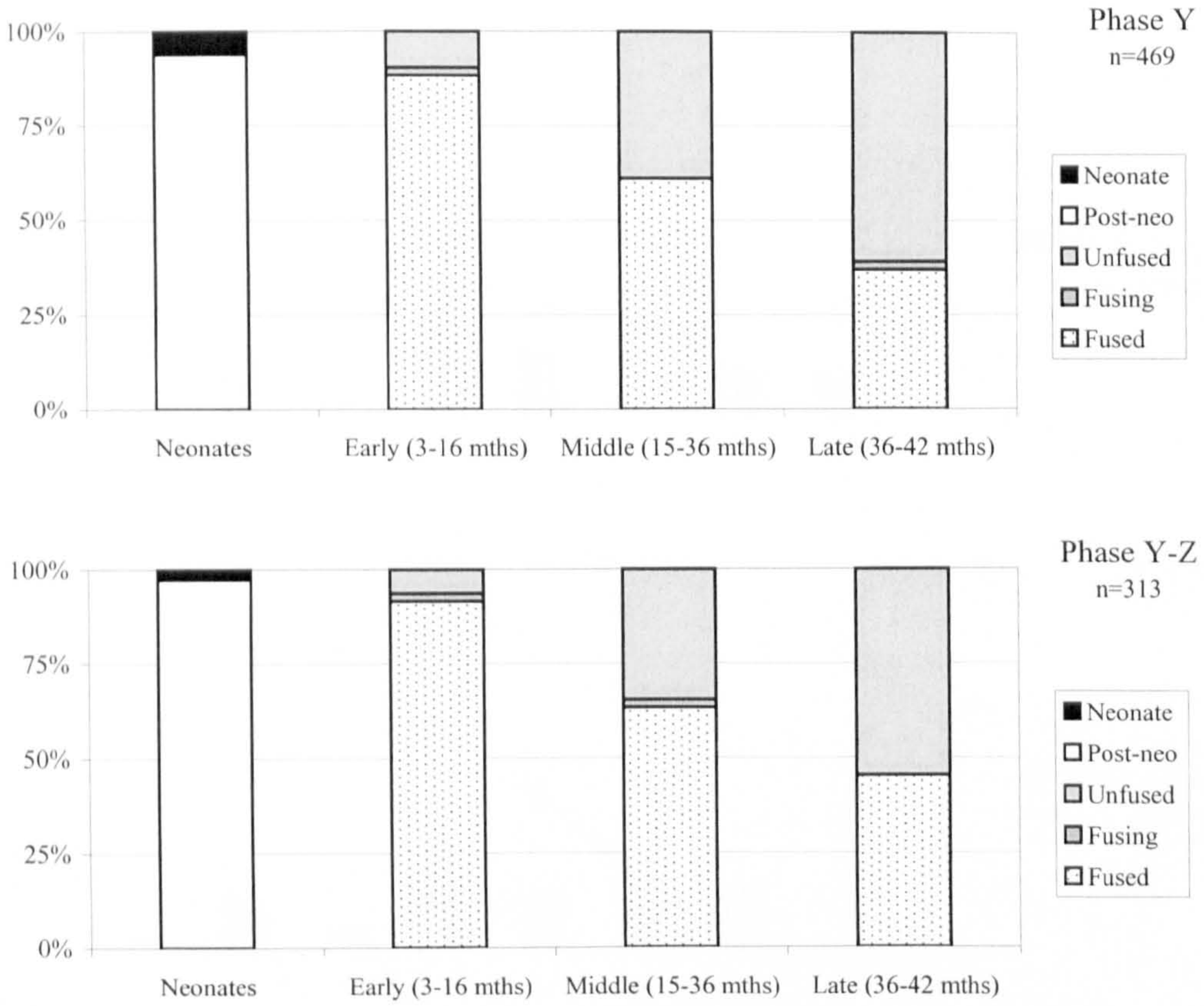


Figure 120 cont. Sheep/goat: Mortality profiles: Post-cranial epiphyseal fusion by chronological phase, based on Schmid (1972: 75, Table 9) and Silver (1969: 252-253, Table A)

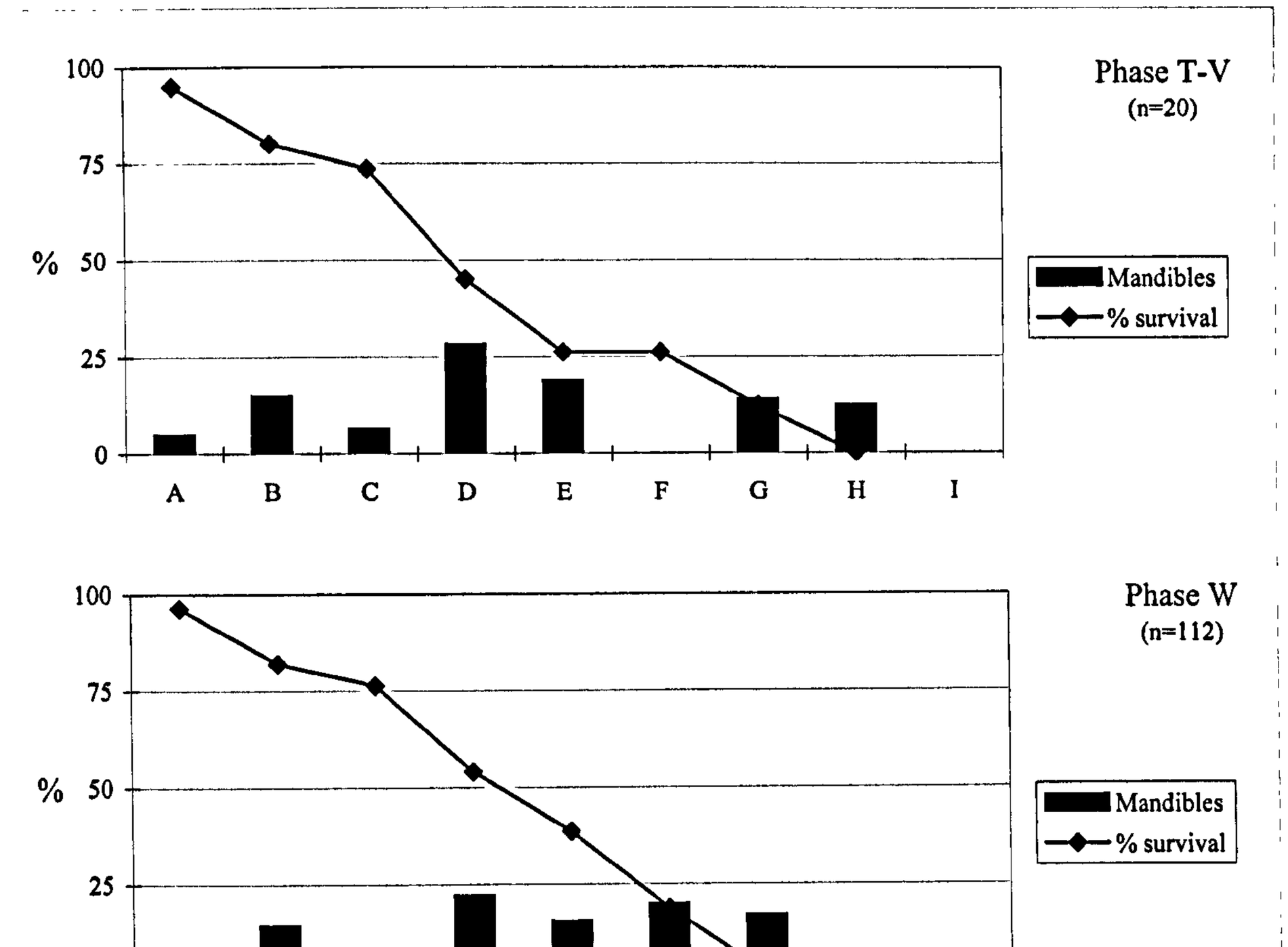


Figure 121. Sheep/goat: Mortality profiles: Mandibular tooth eruption and wear, based on Payne (1973: 299)

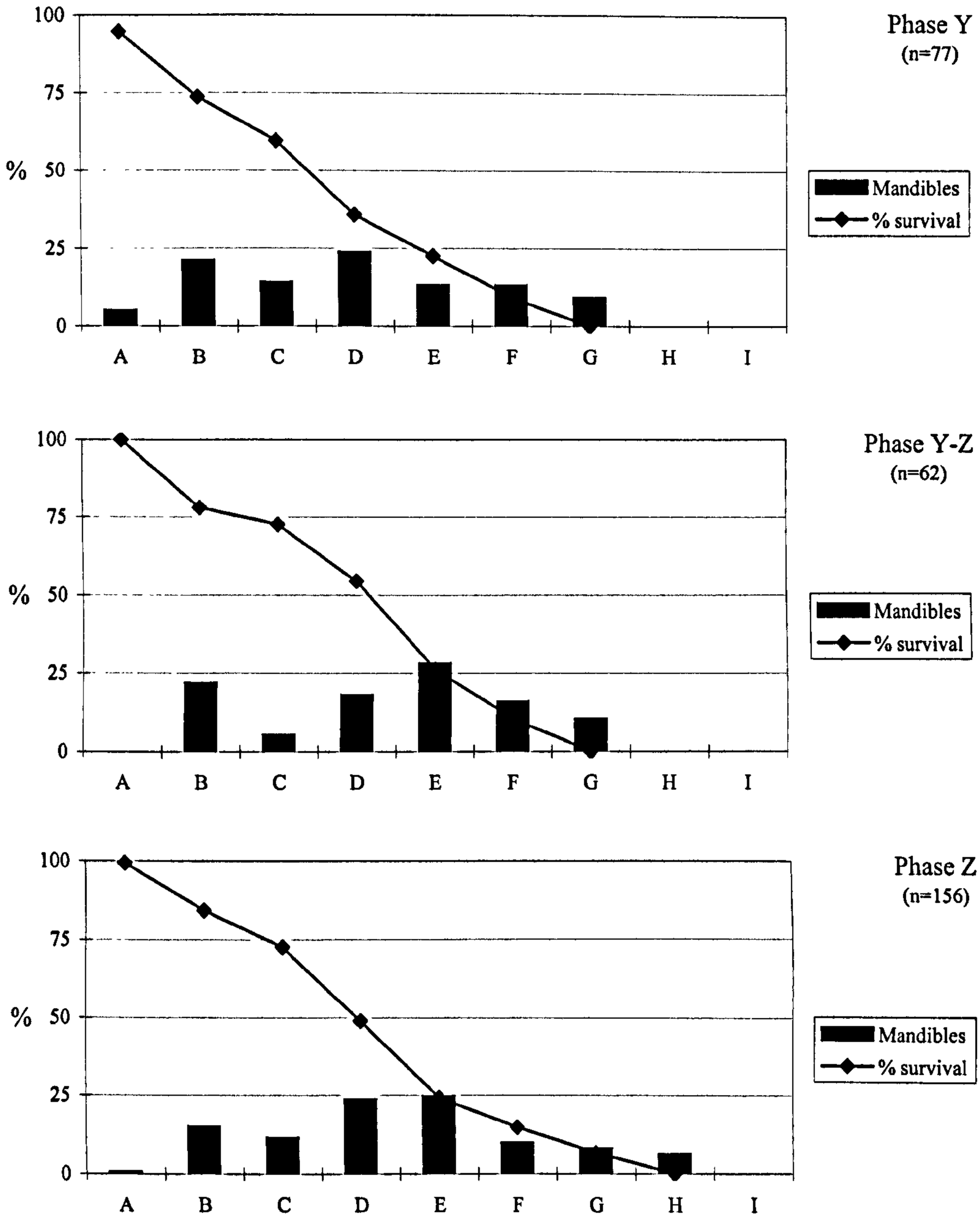


Figure 121 cont. Sheep/goat: Mortality profiles: Mandibular tooth eruption and wear, based on Payne (1973: 299)

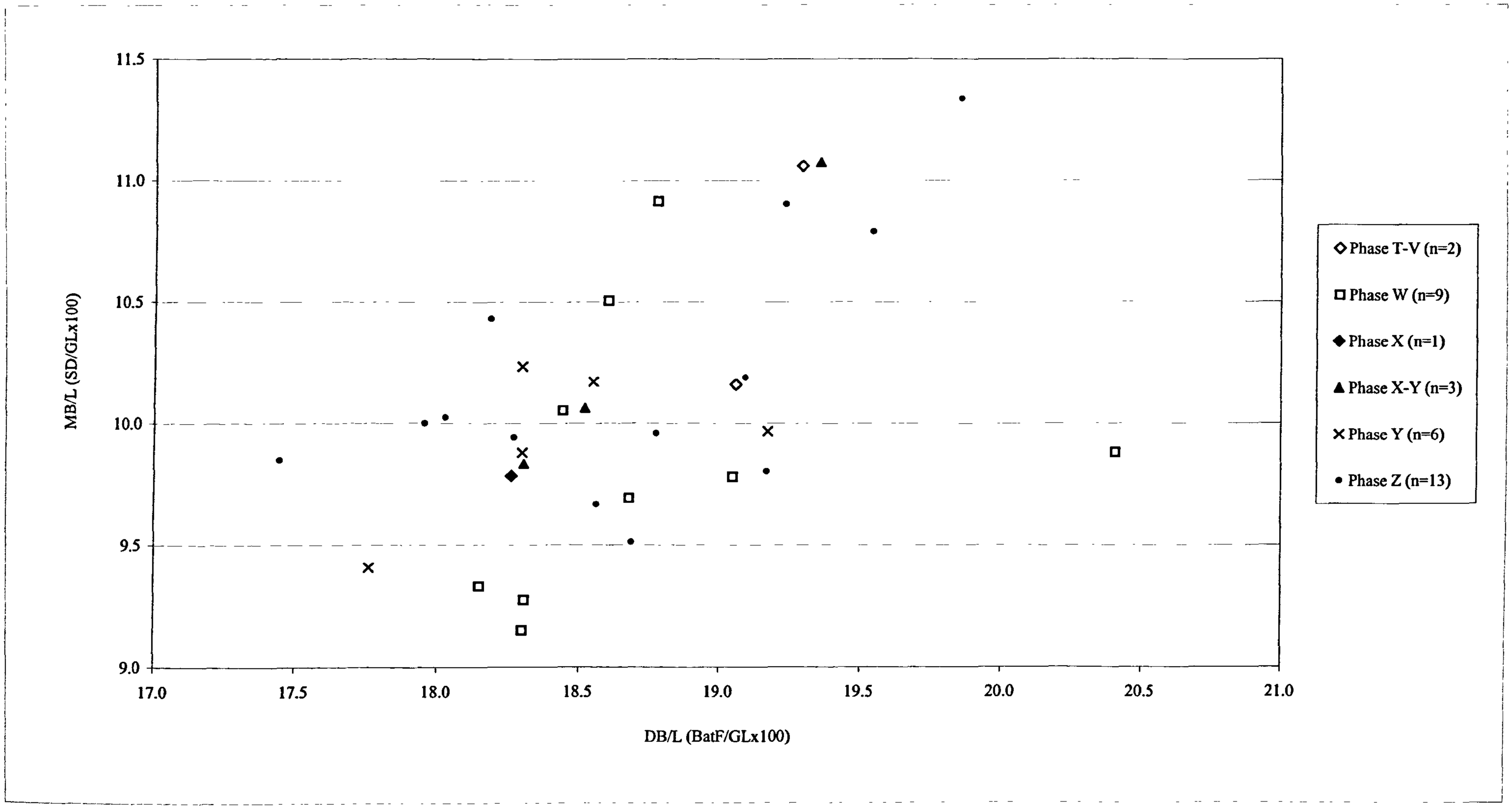


Figure 122. Sheep/goat: Sexing: Metacarpal shape indices: MB/L (mid-breadth = SD/GLx100) against DB/L (distal breadth = BatF/GLx100) by chronological phase, based on Howard (1963[#567])

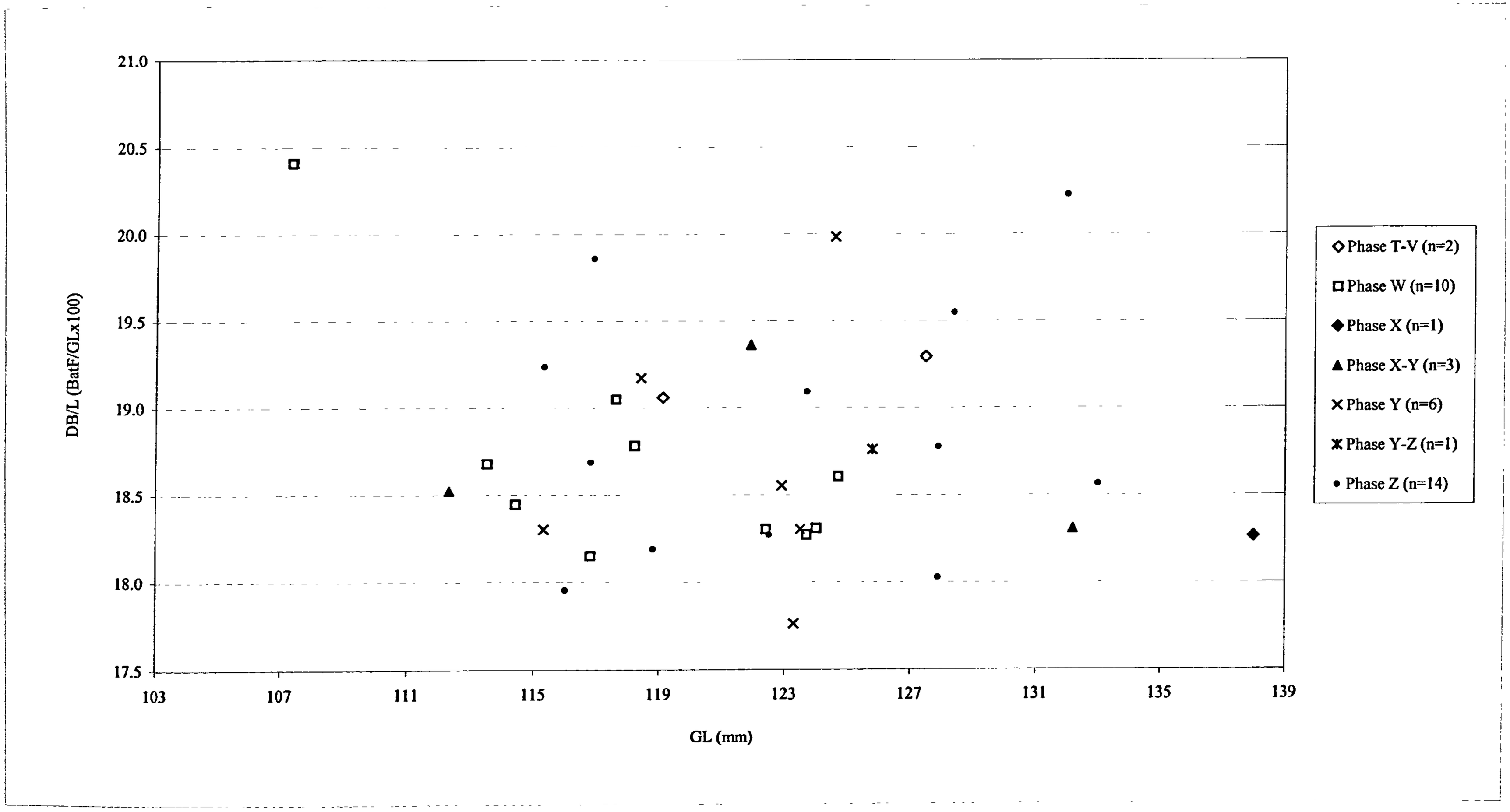


Figure 123. Sheep/goat: Sexing: Metacarpal shape indices DB/L (distal breadth = BatF/GLx100) against GL by chronological phase, based on Howard (1963)

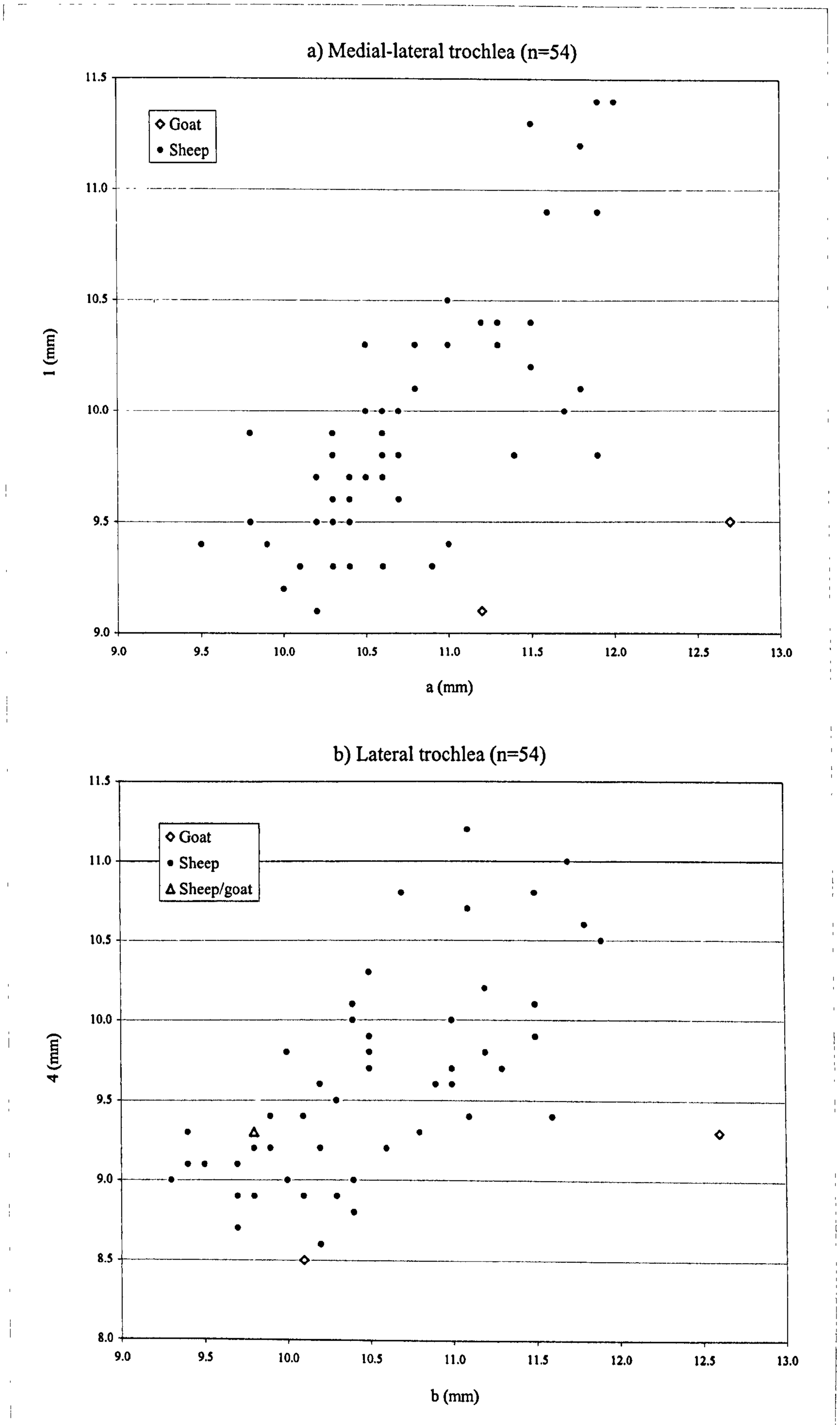


Figure 124. Sheep/goat: Biometry: Species distinction: Metacarpal distal medio-lateral condyle (a by 1) and lateral condyle (b by 4) shape indices

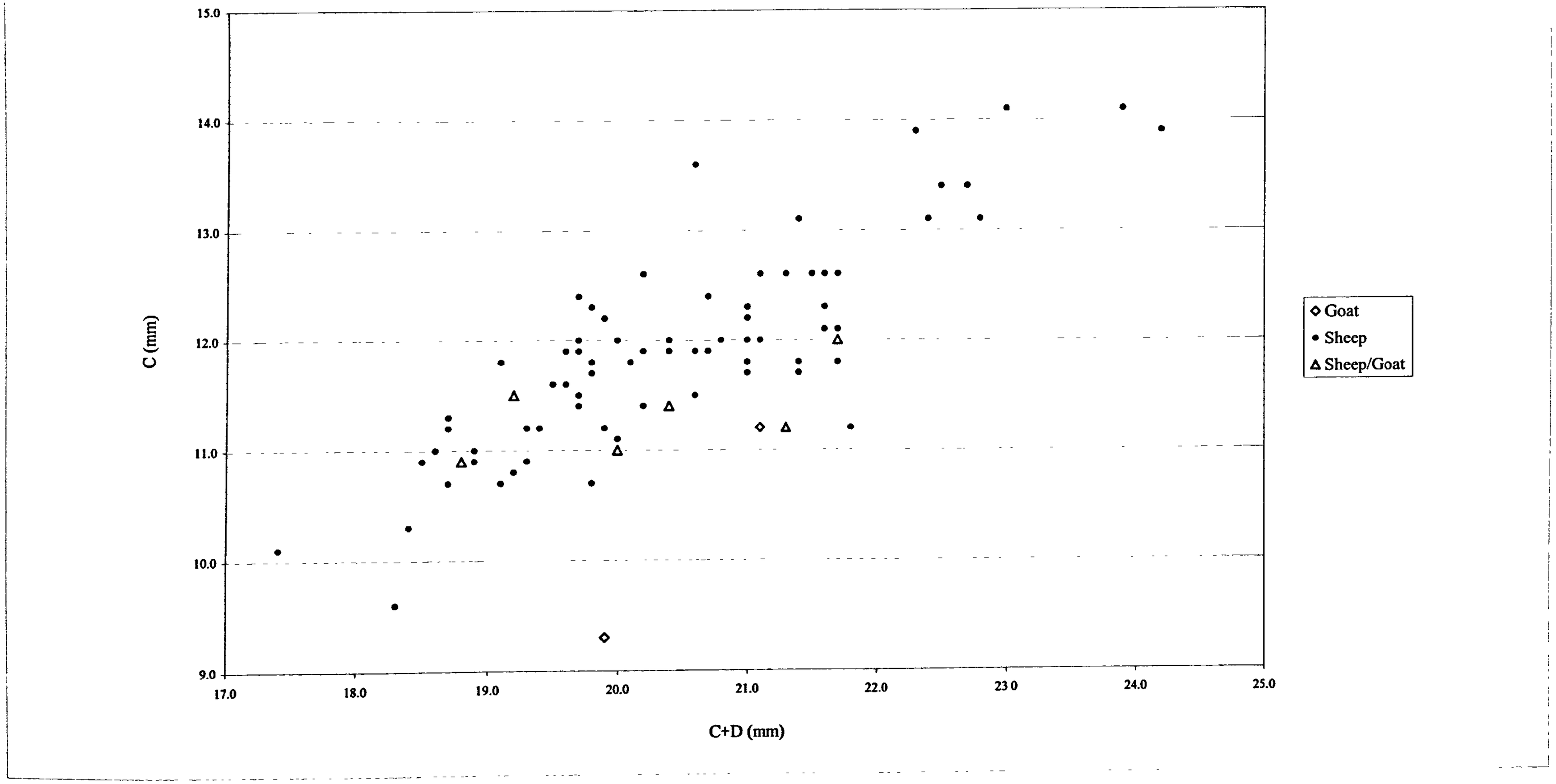


Figure 125. Sheep/goat: Biometry: Species distinction: Calcaneum shape indices (C+D by C), based on 82 cases

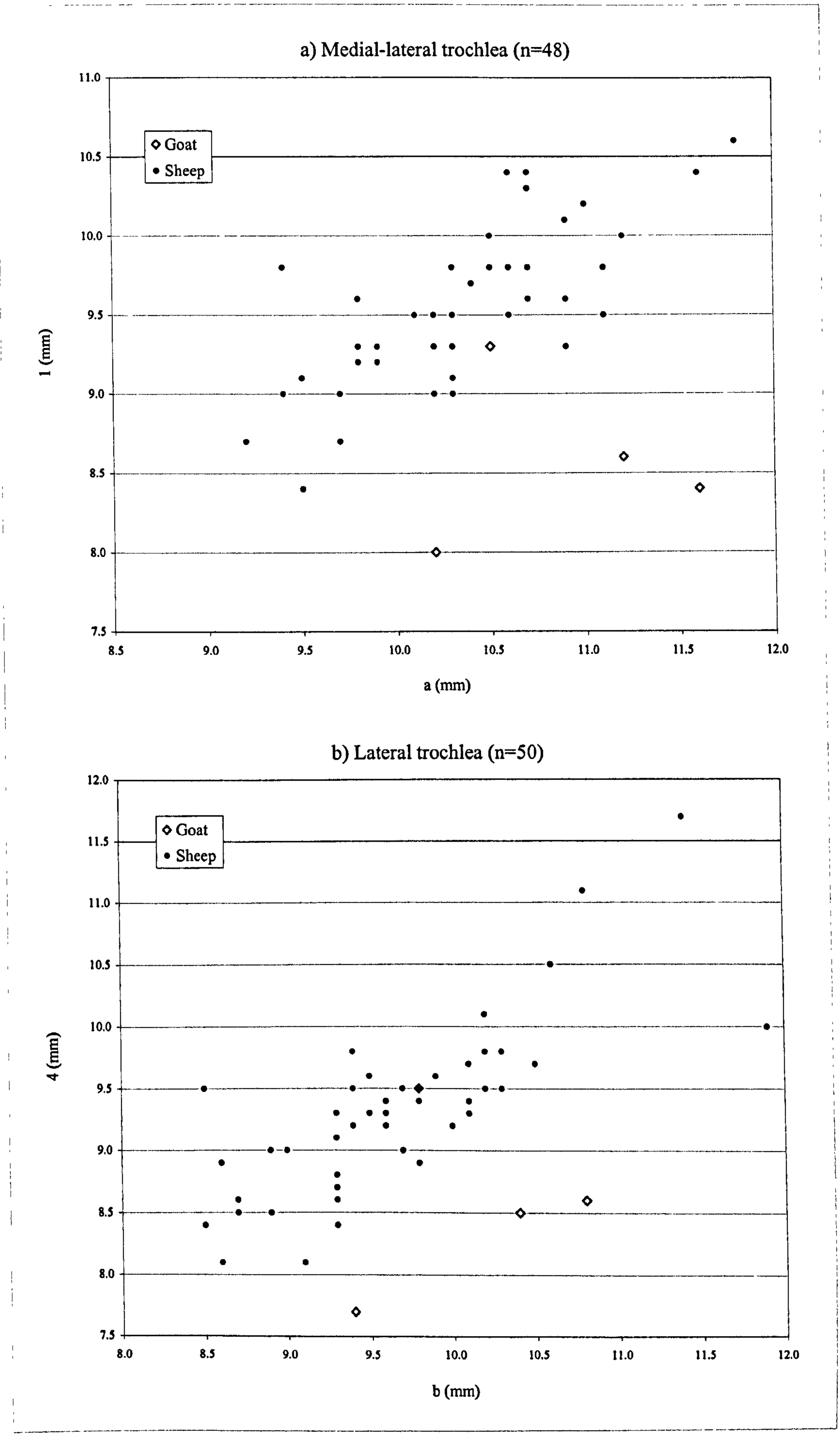


Figure 126. Sheep/goat: Biometry: Species distinction: Metatarsal distal medio-lateral condyle (a by 1) and lateral condyle (b by 4) shape indices

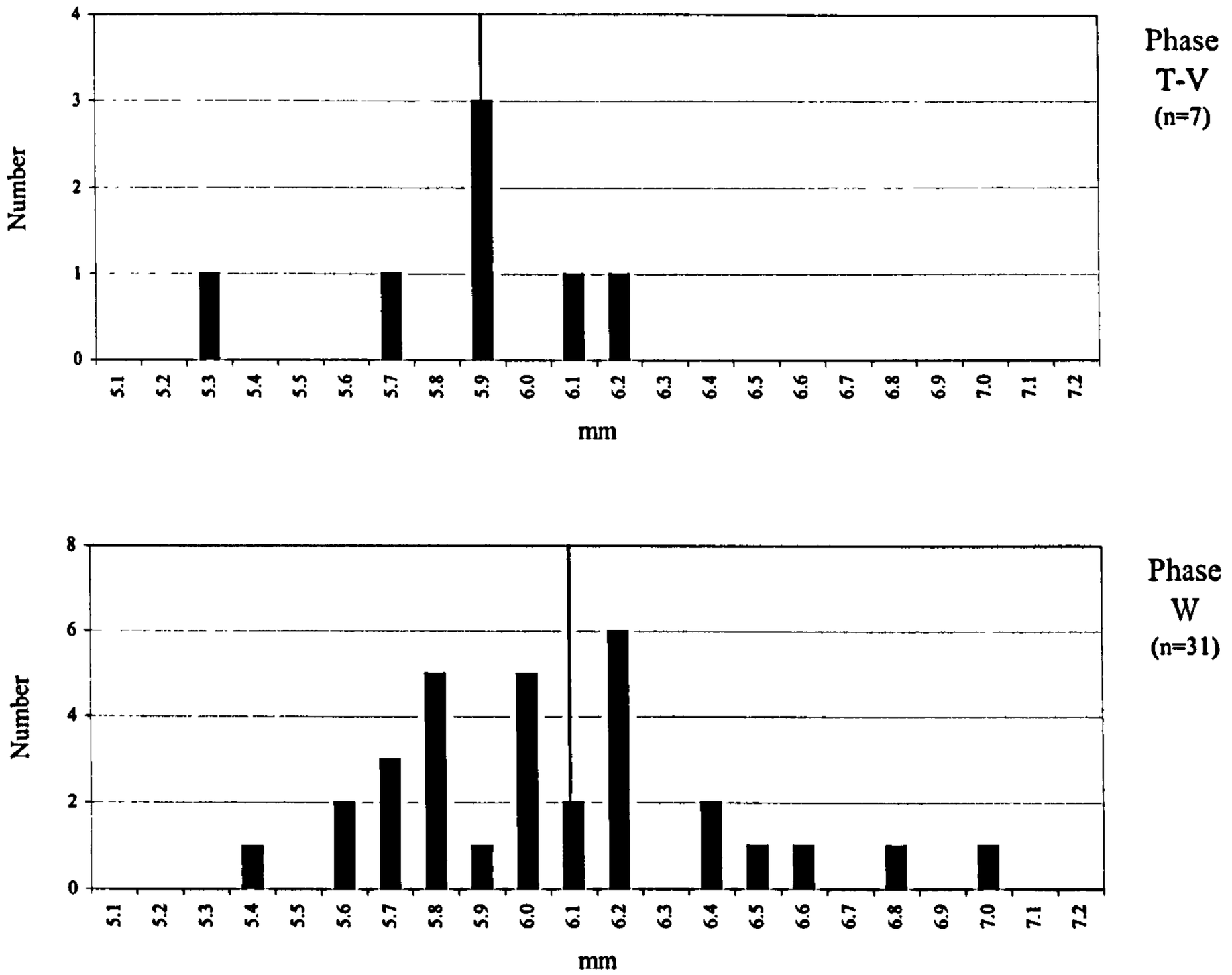


Figure 127. Sheep/goat: Biometry: Diachronic size change: Fourth deciduous premolar maximum widths (W) by chronological phase

NB. Vertical line represents mean value for phase

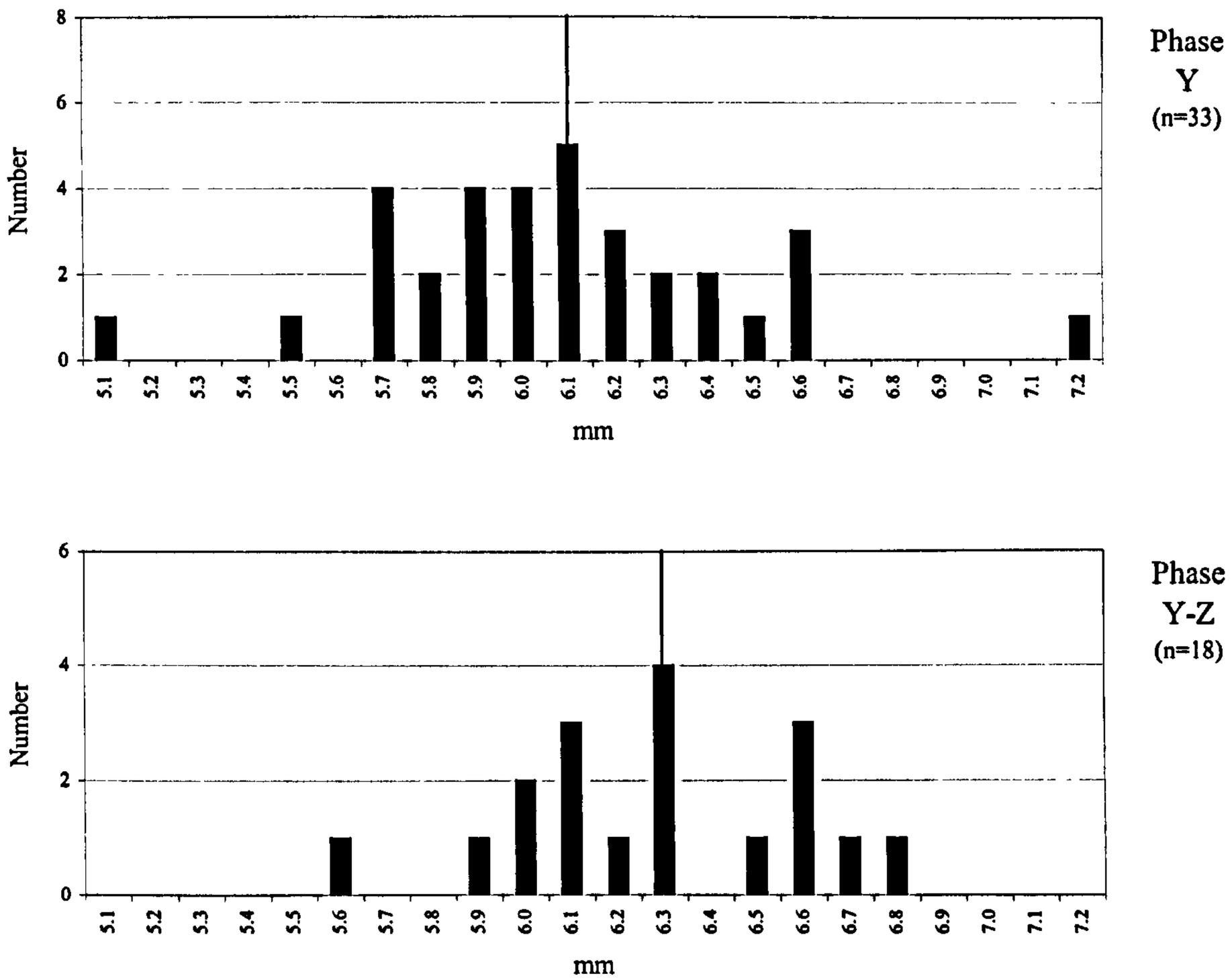


Figure 127 cont. Sheep/goat: Biometry: Diachronic size change: Fourth deciduous premolar maximum widths (W) by chronological phase

NB. Vertical line represents mean value for phase

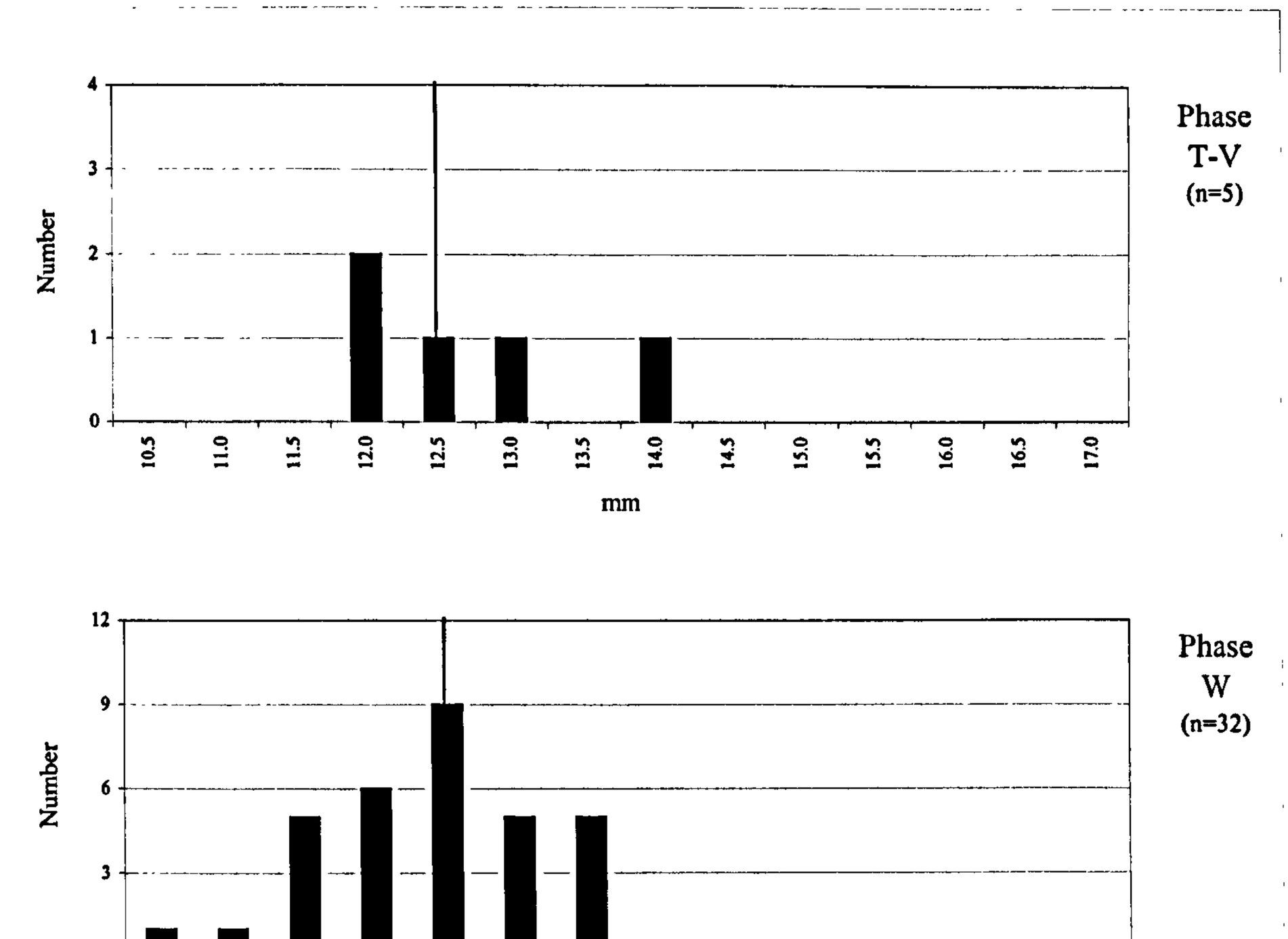


Figure 128. Sheep/goat: Biometry: Diachronic size change: Humerus heights of the trochlea constriction (HTC) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

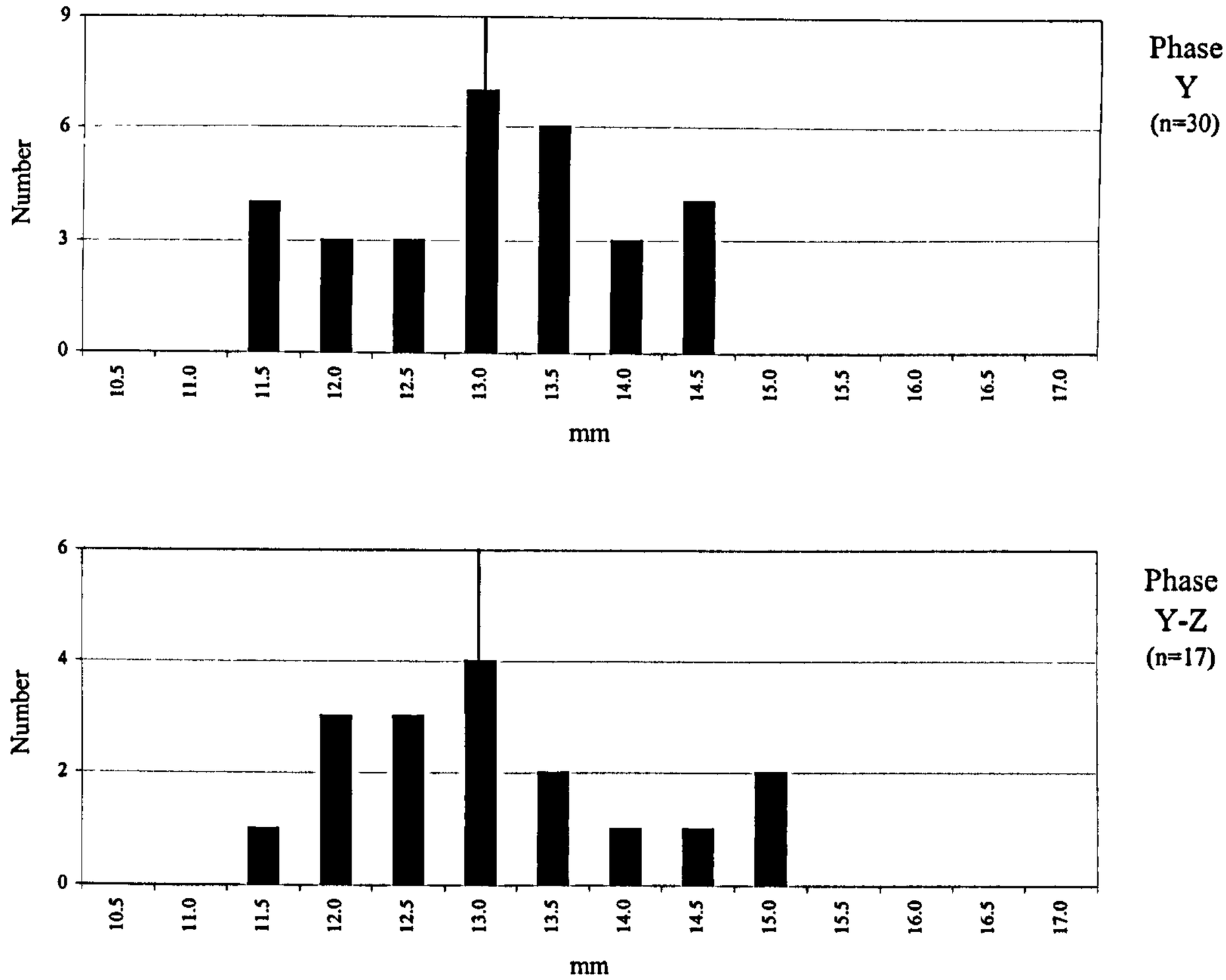


Figure 128 cont. Sheep/goat: Biometry: Diachronic size change: Humerus heights of the trochlea constriction (HTC) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

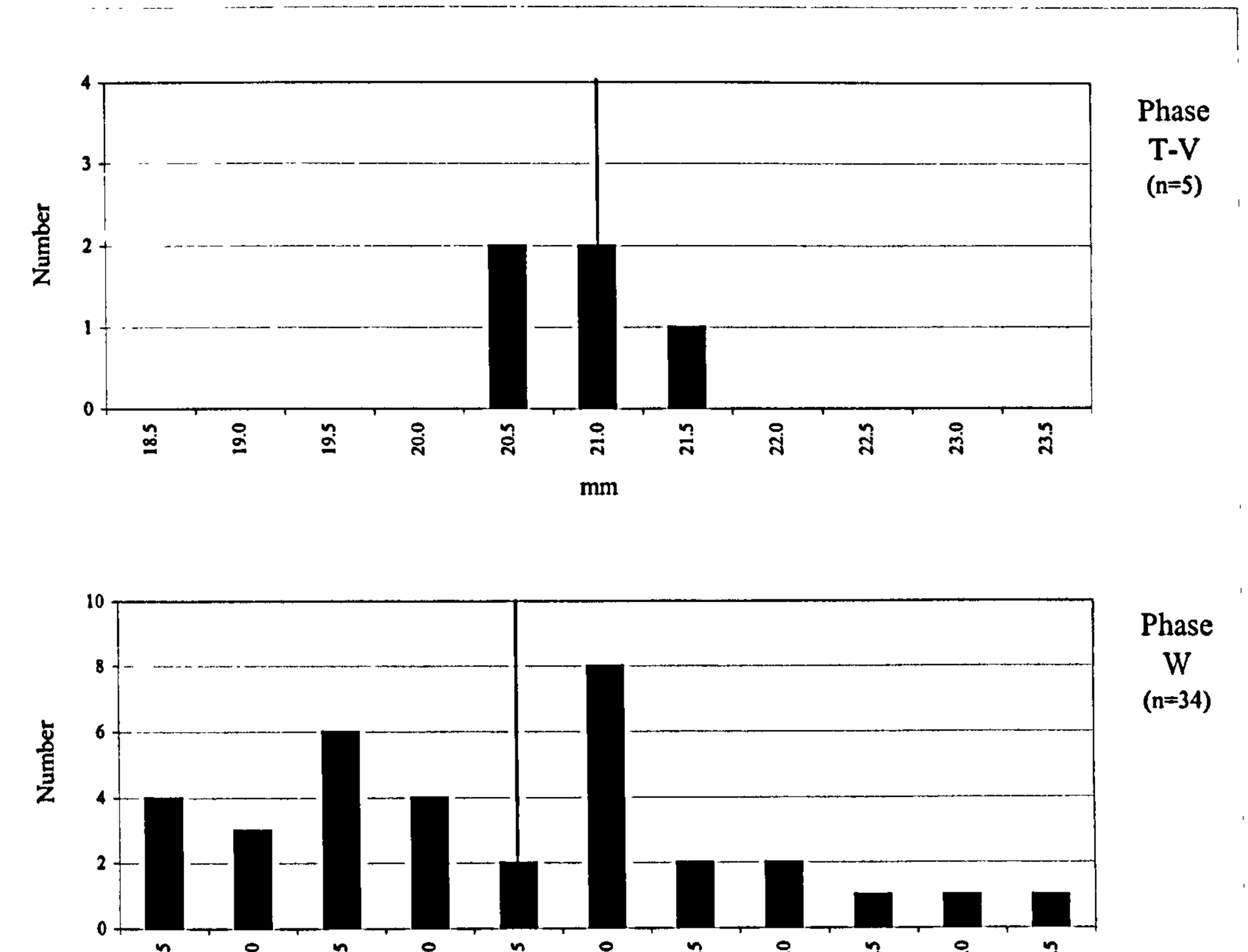


Figure 129. Sheep/goat: Biometry: Diachronic size change: Metacarpal proximal widths (Bp) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

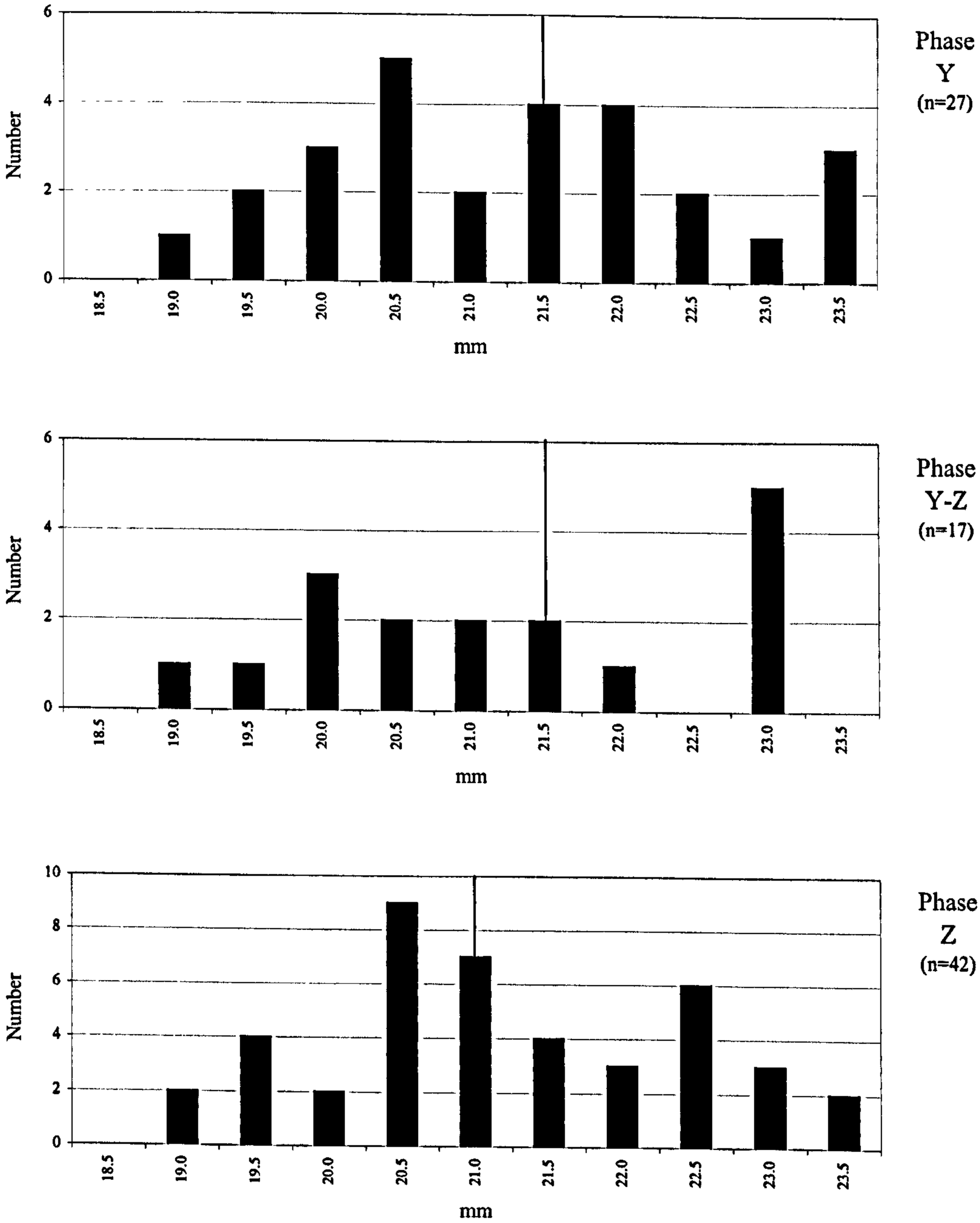


Figure 129 cont. Sheep/goat: Biometry: Diachronic size change: Metacarpal proximal widths (Bp) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

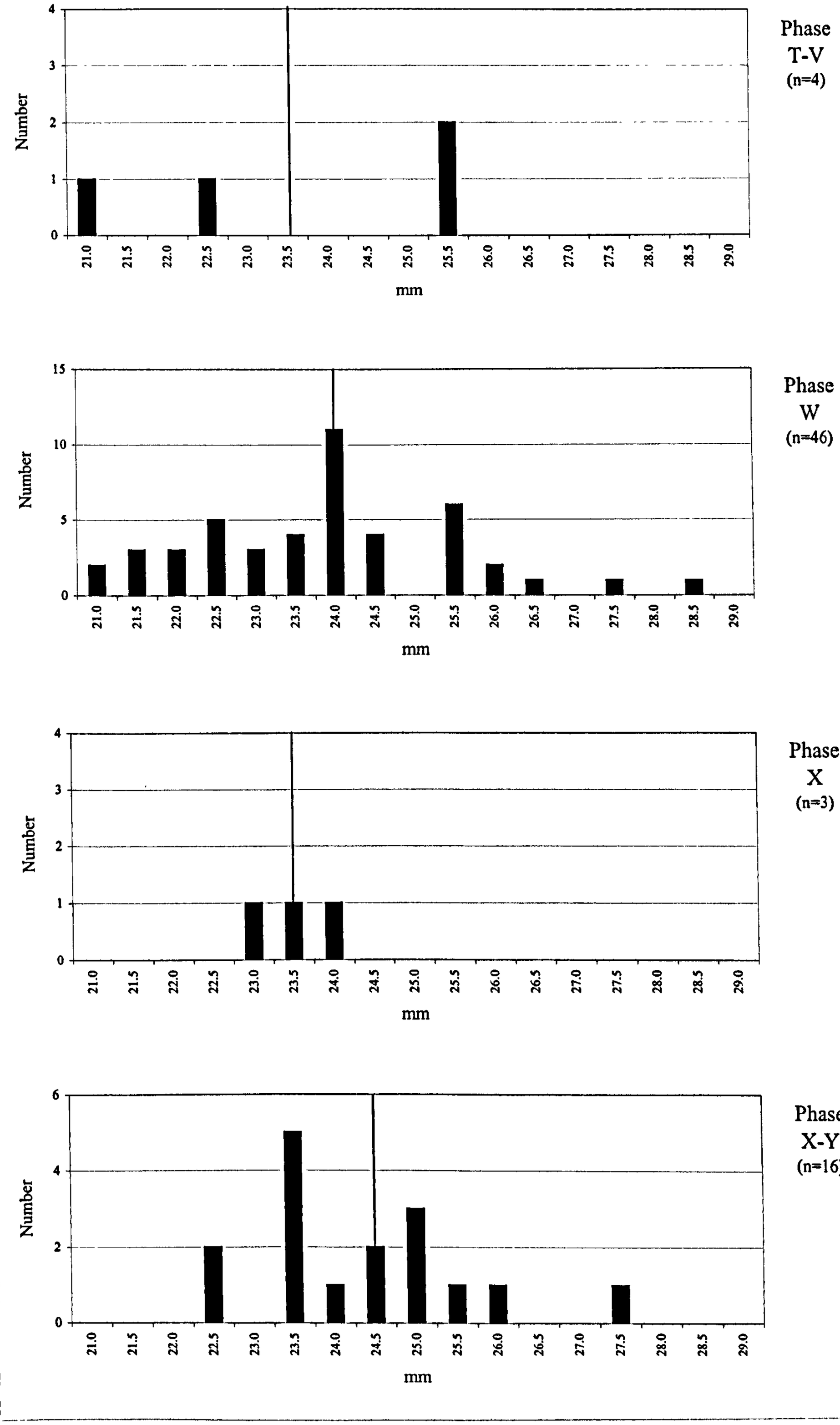


Figure 130. Sheep/goat: Biometry: Diachronic size change: Tibia distal widths (Bd) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

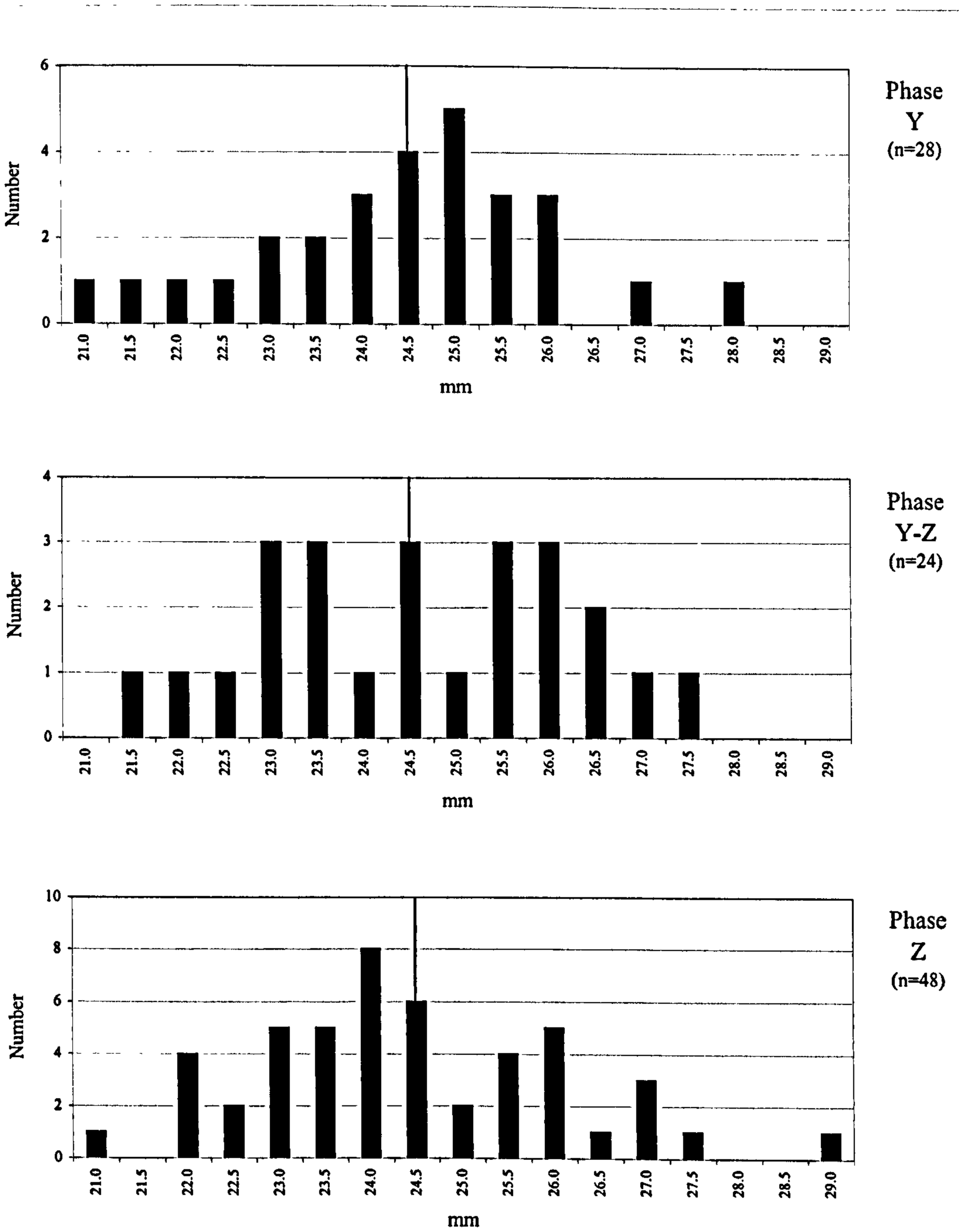


Figure 130 cont. Sheep/goat: Biometry: Diachronic size change: Tibia distal widths (Bd) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

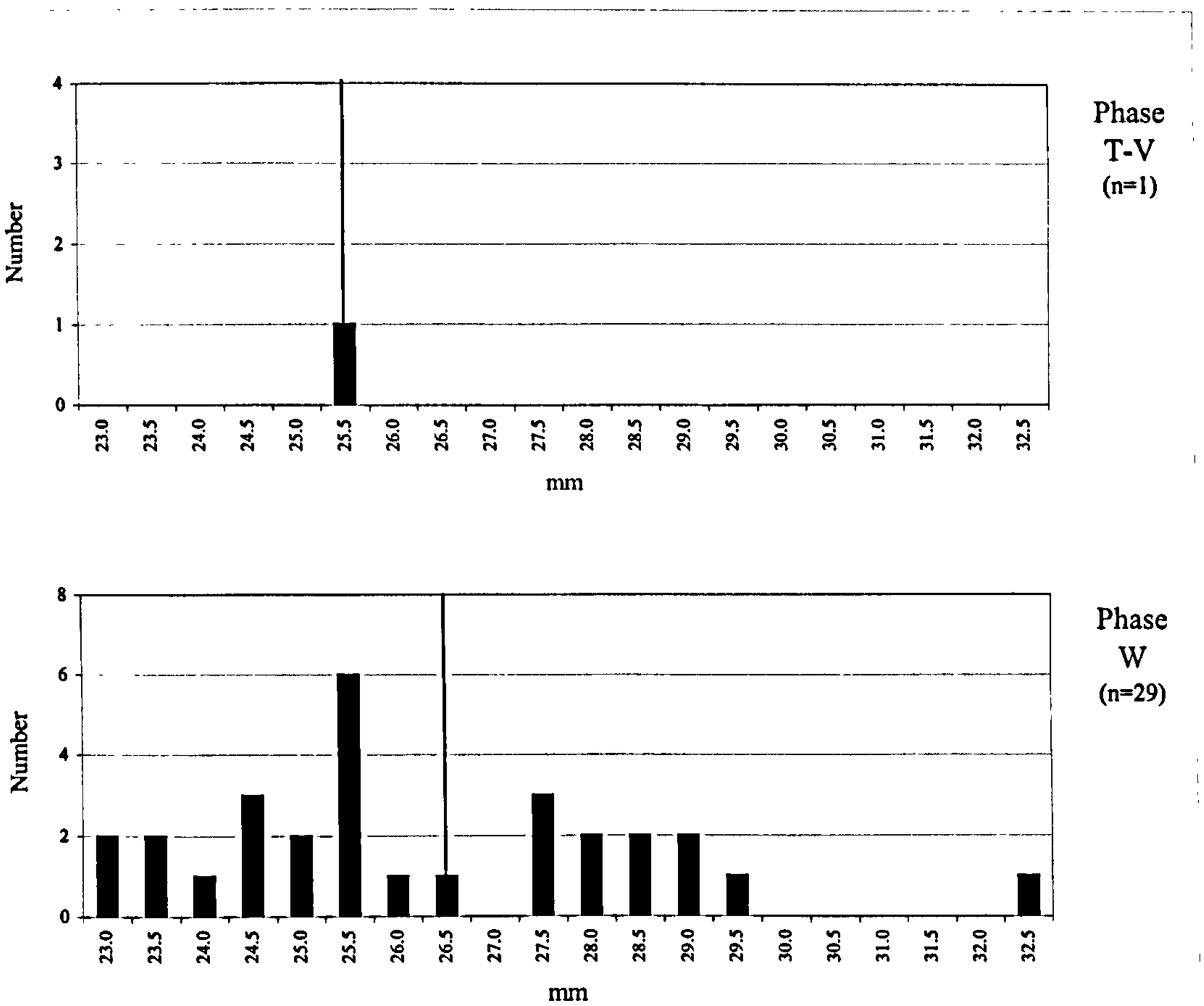


Figure 131. Sheep/goat: Biometry: Diachronic size change: Astragalus greatest lateral lengths (GLl) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

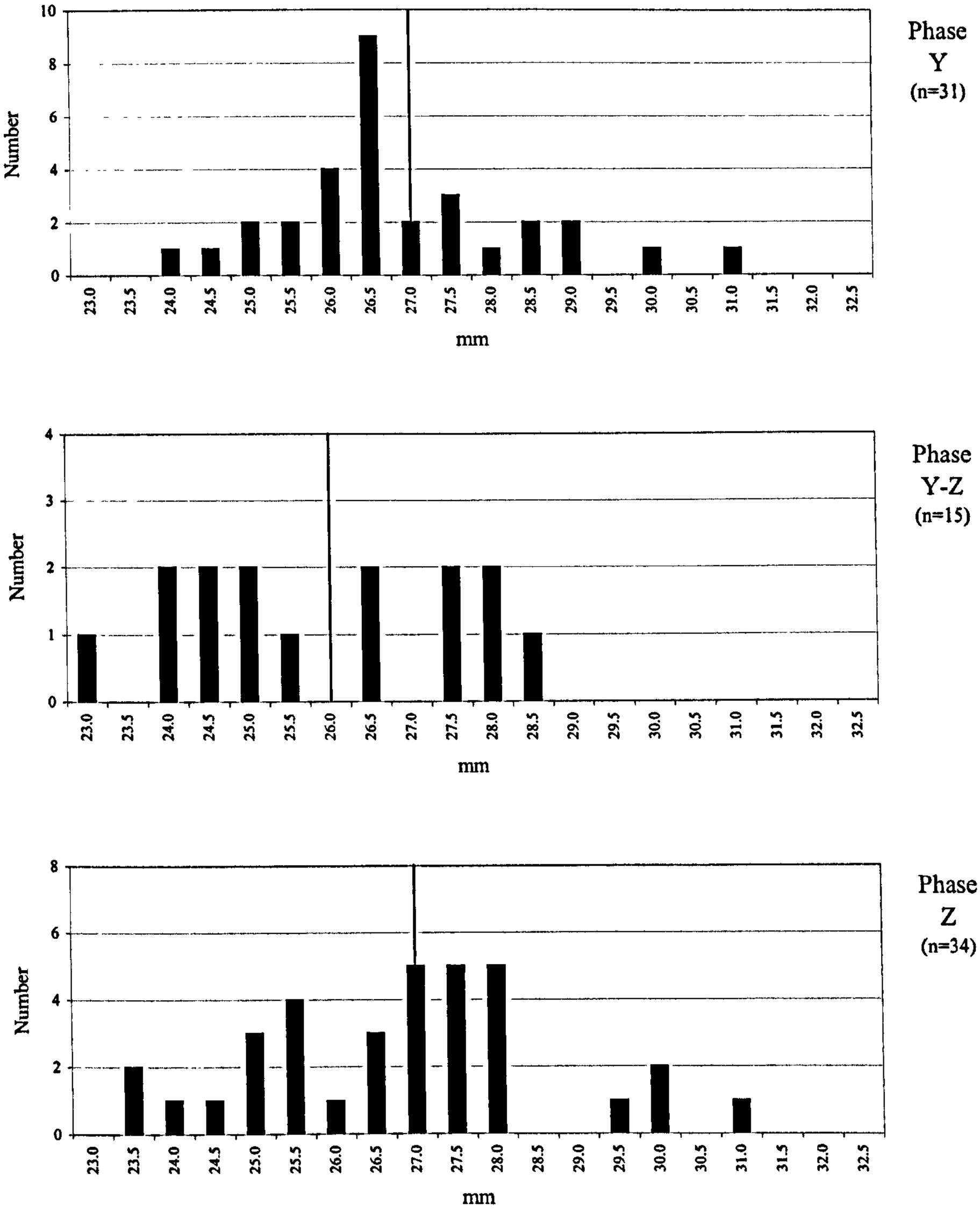


Figure 131 cont. Sheep/goat: Biometry: Diachronic size change: Astragalus greatest lateral lengths (GLl) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

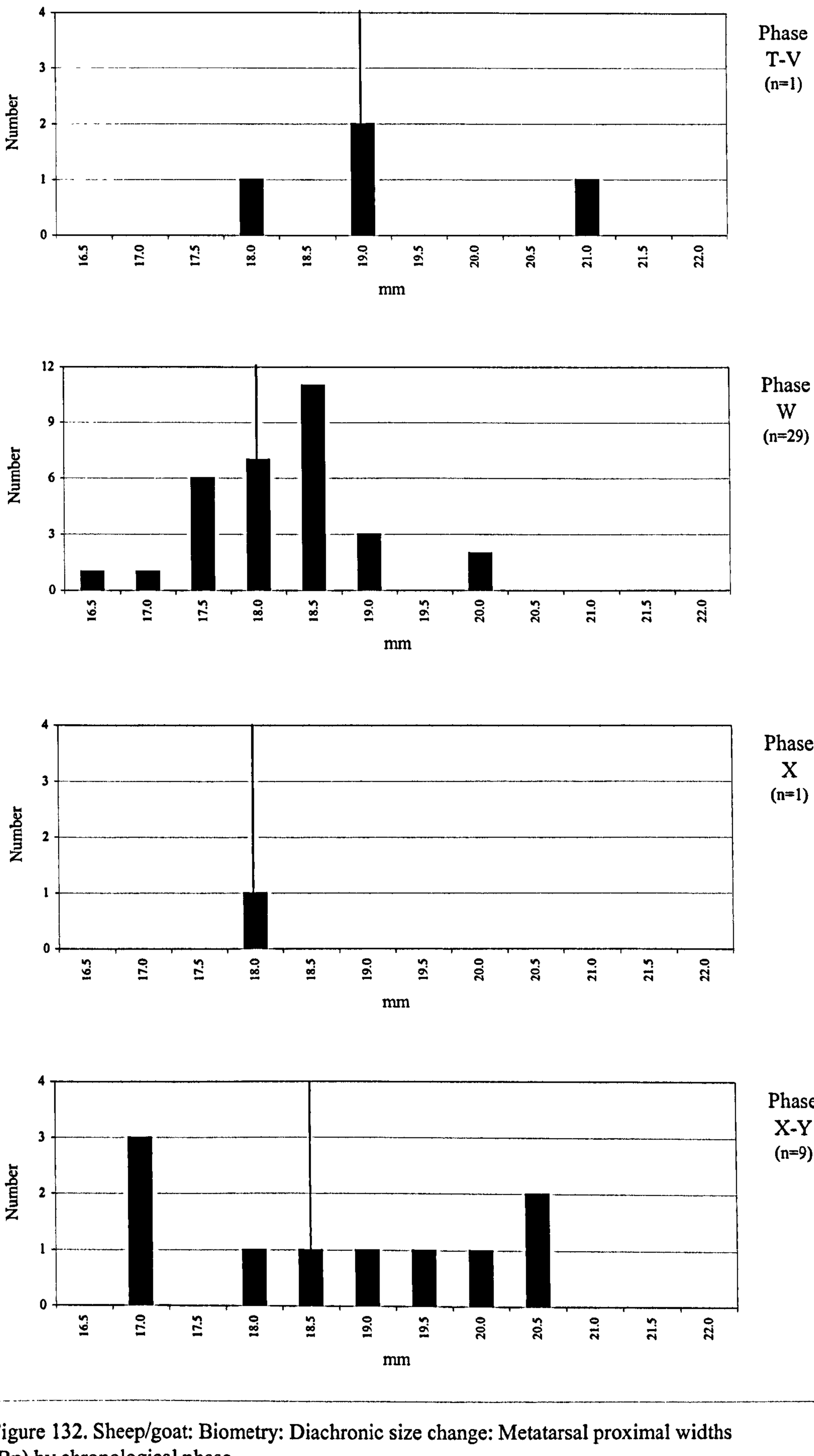


Figure 132. Sheep/goat: Biometry: Diachronic size change: Metatarsal proximal widths (Bp) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase

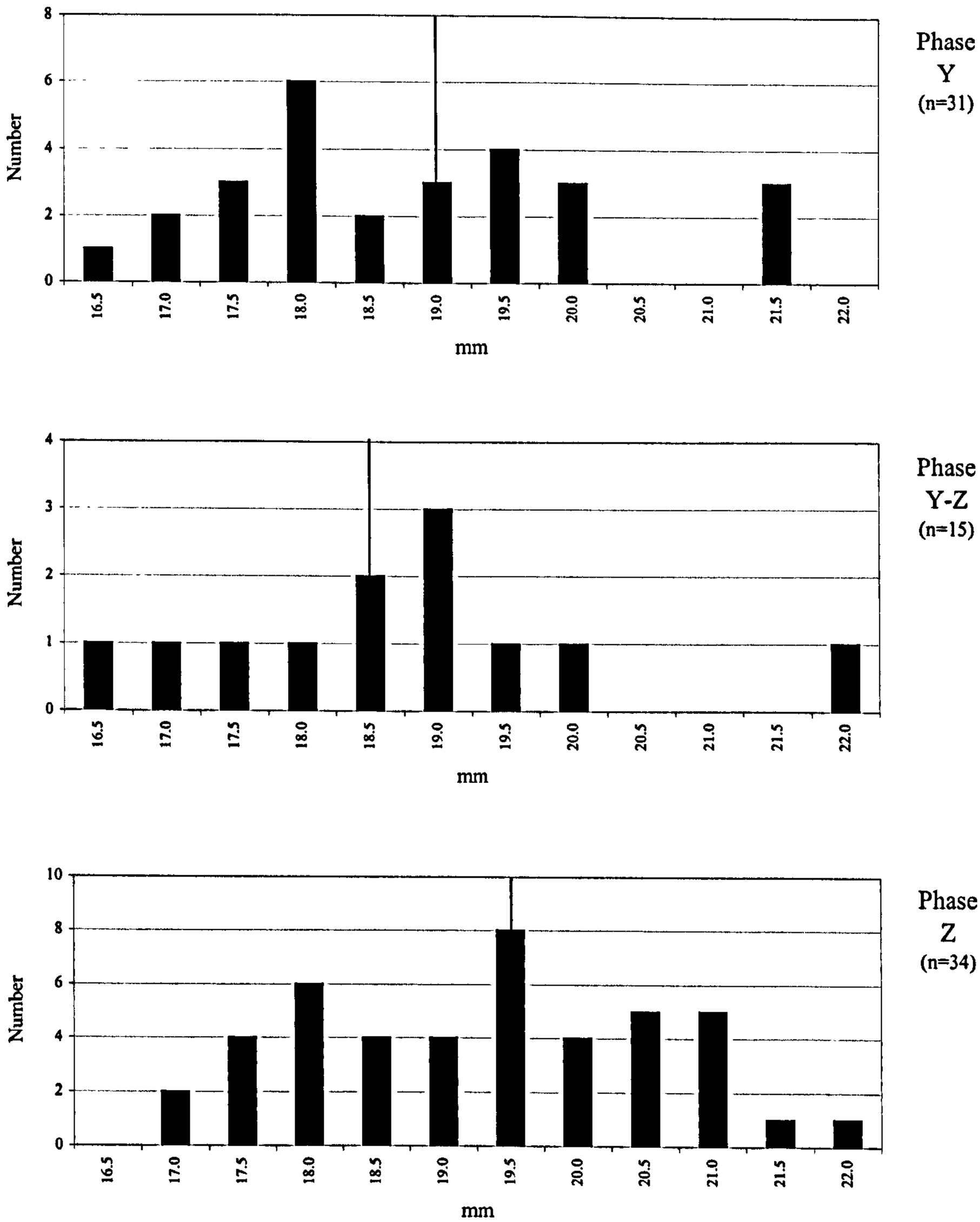
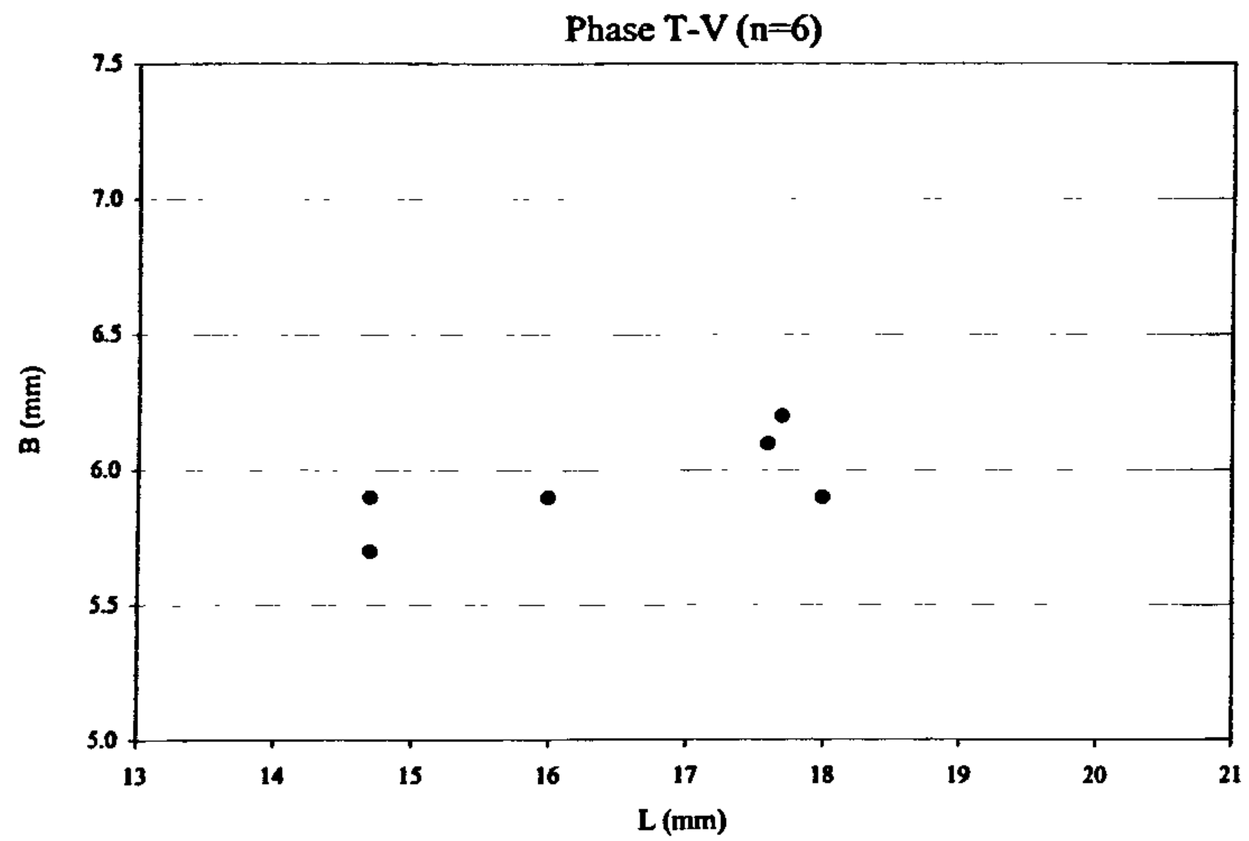
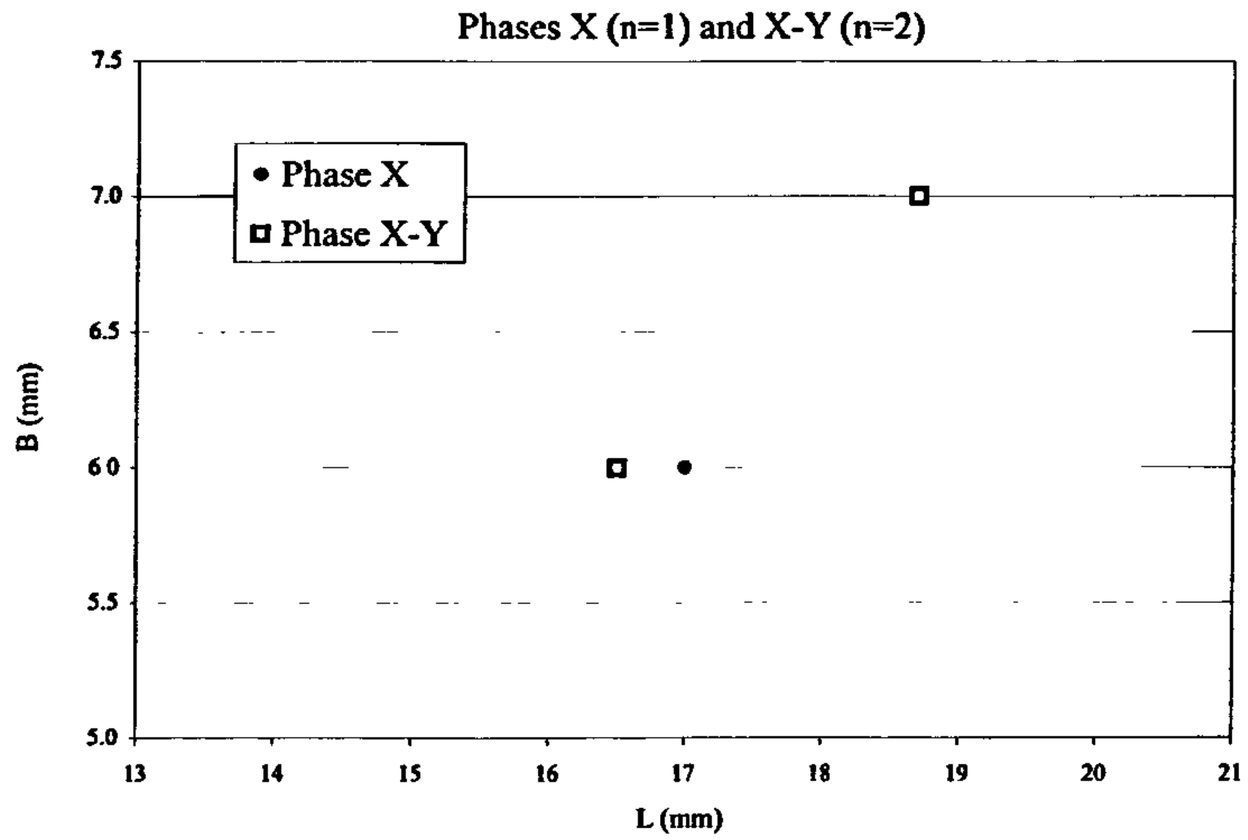
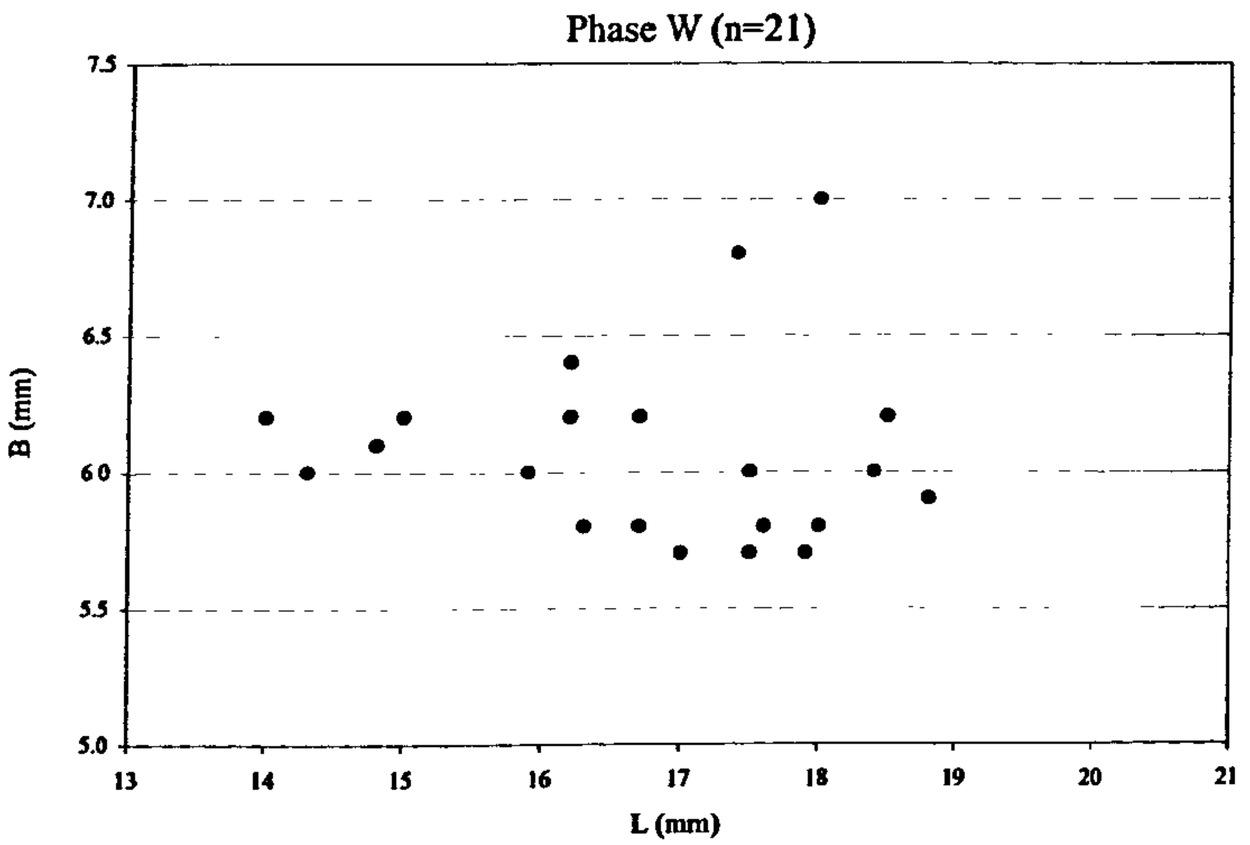


Figure 132 cont. Sheep/goat: Biometry: Diachronic size change: Metatarsal proximal widths (Bp) by chronological phase

NB. Figures rounded to nearest 0.5 mm; vertical line represents mean value for phase







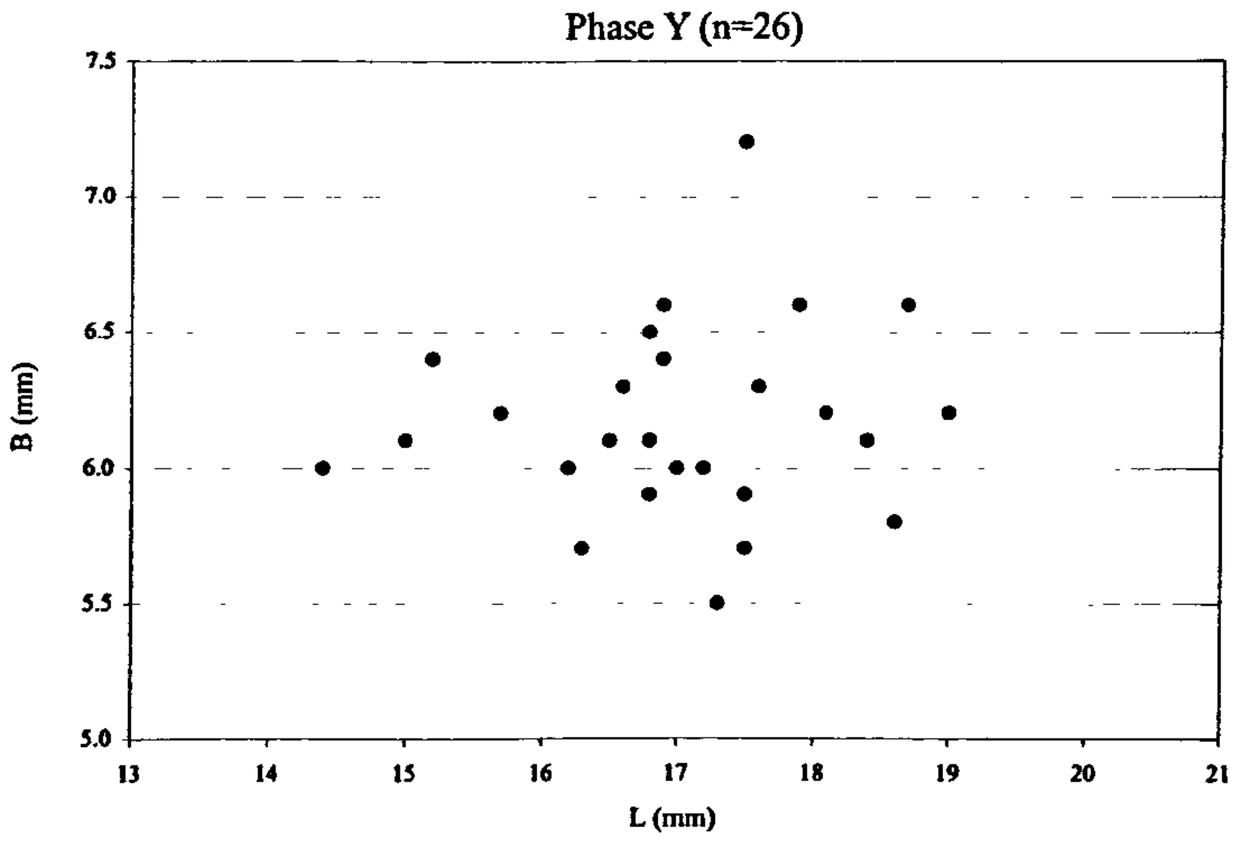
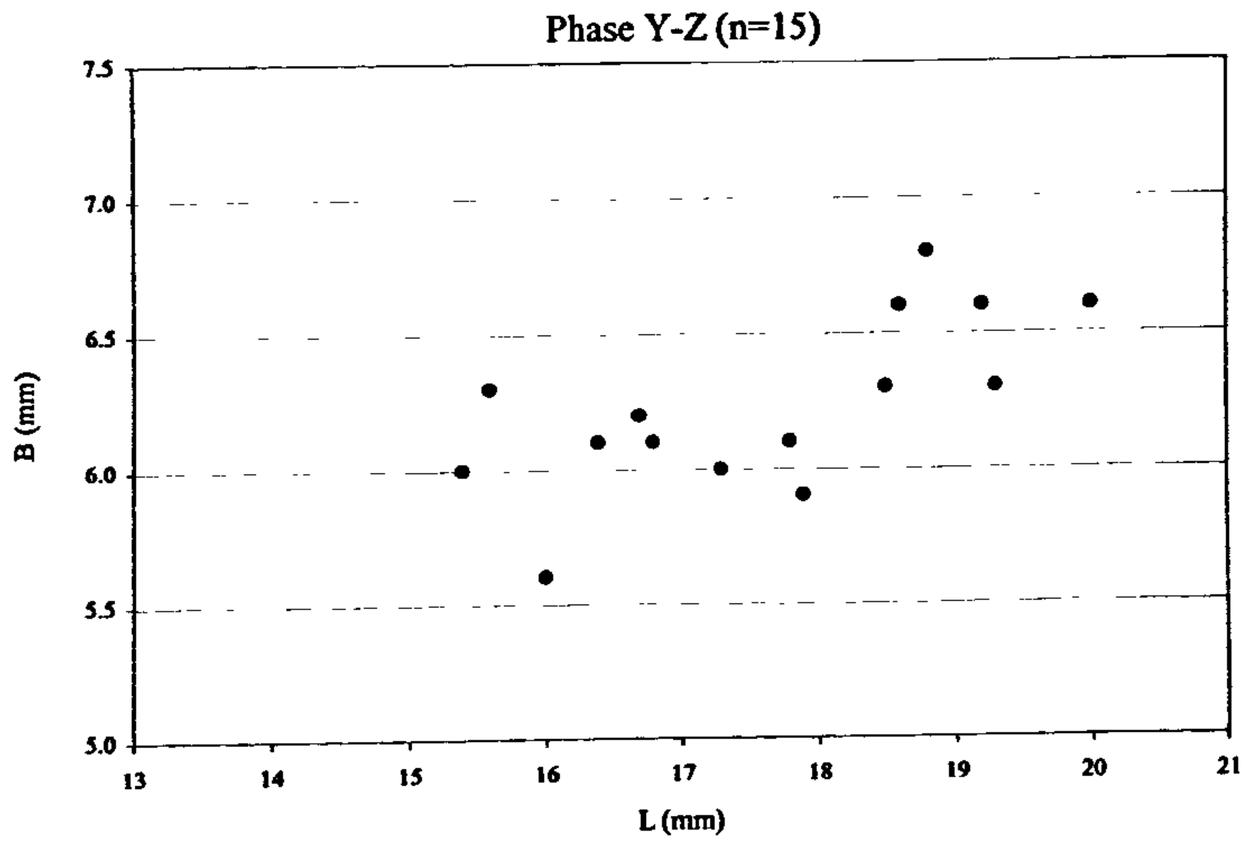


Figure 133. Sheep/goat: Biometry: Breed and/or sex: Fourth deciduous premolar shape indices (L by B) by chronological phase



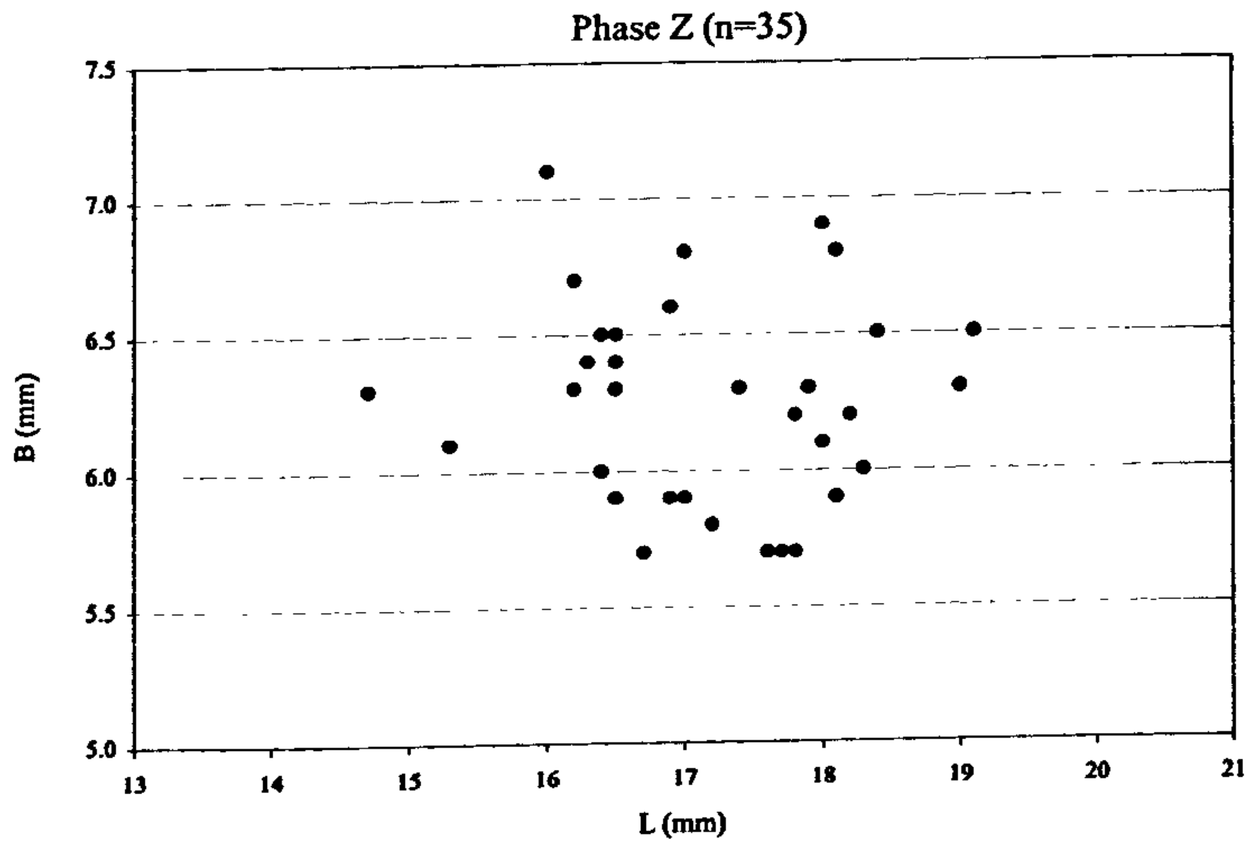
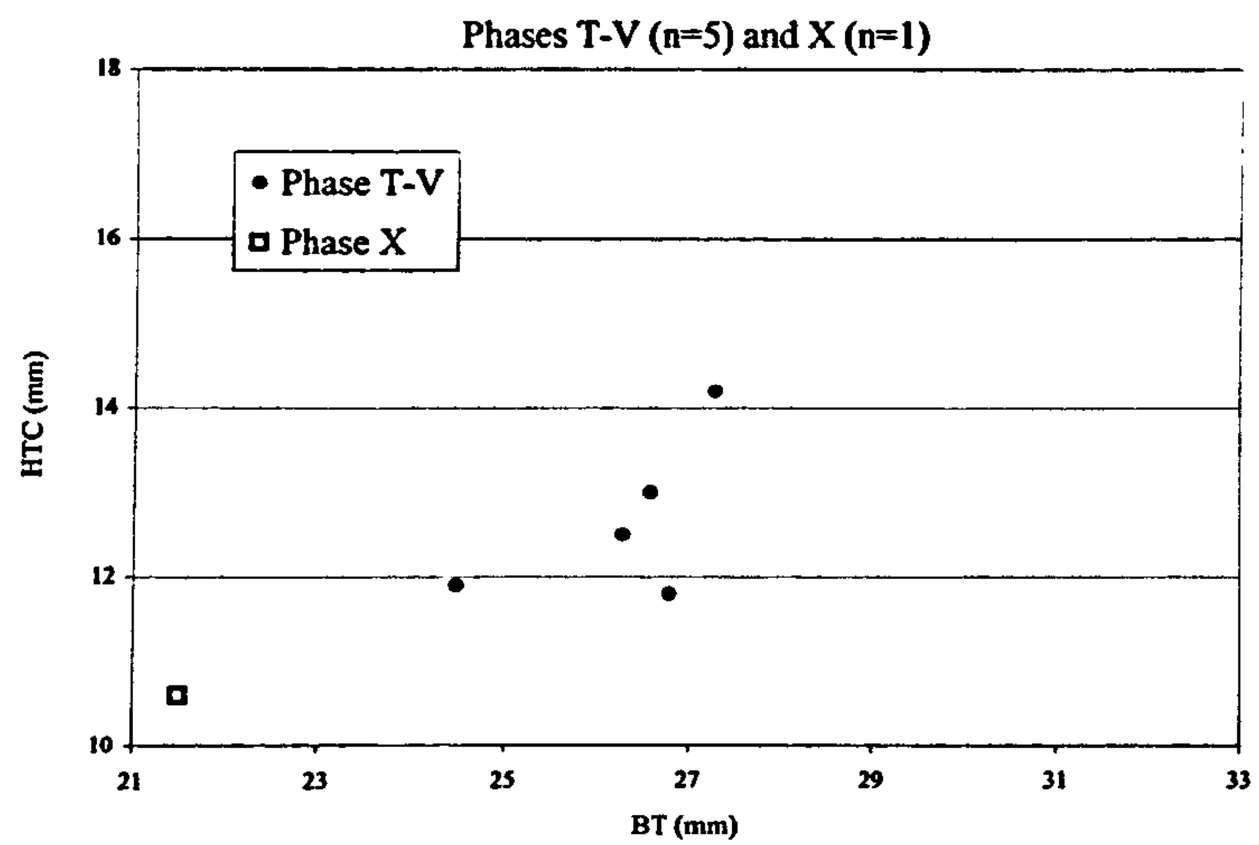
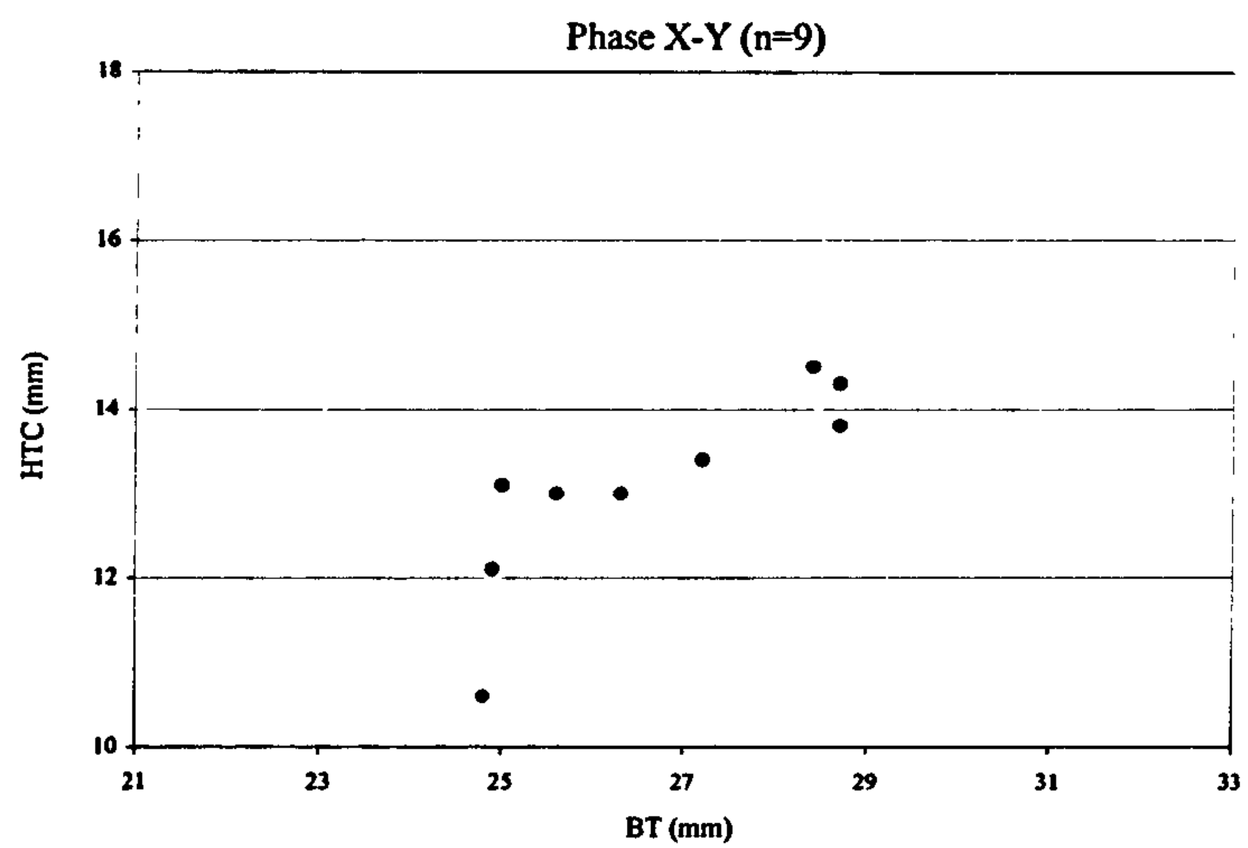
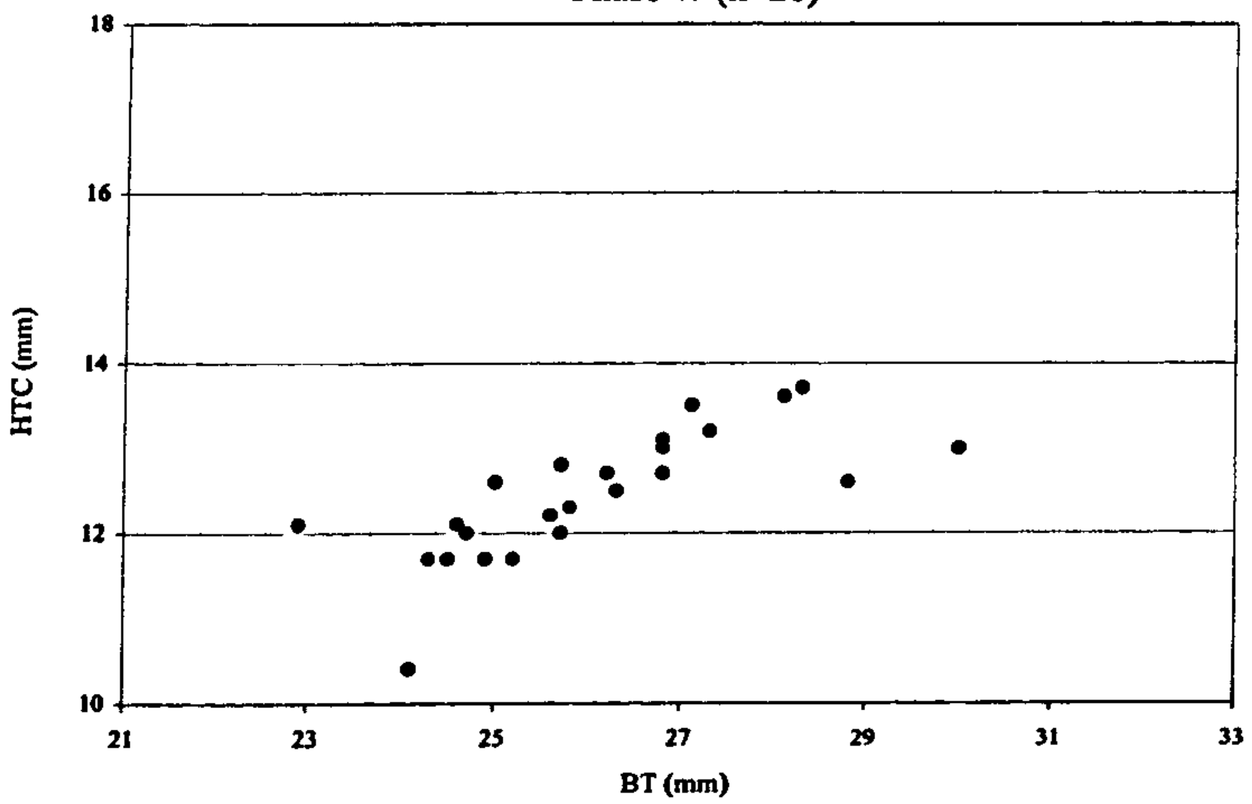


Figure 133 cont. Sheep/goat: Biometry: Breed and/or sex: Fourth deciduous premolar shape indices (L by B) by chronological phase







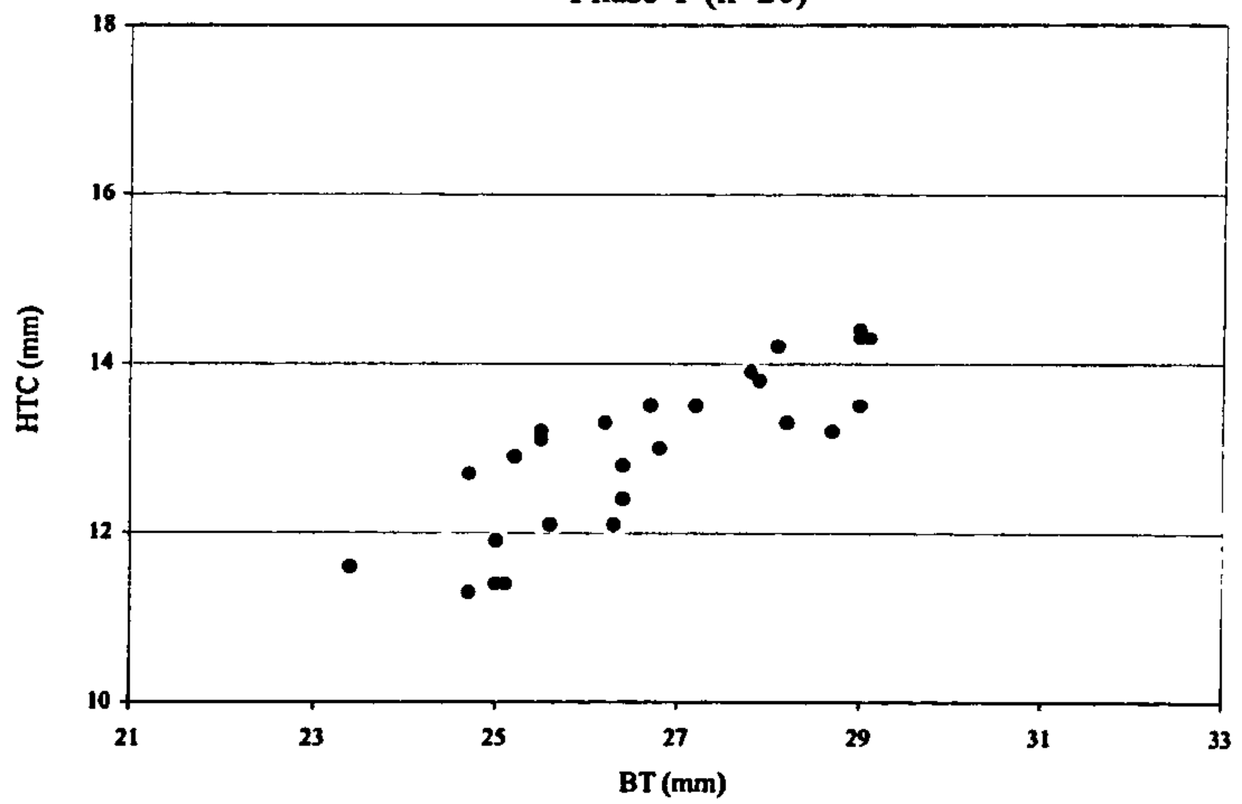
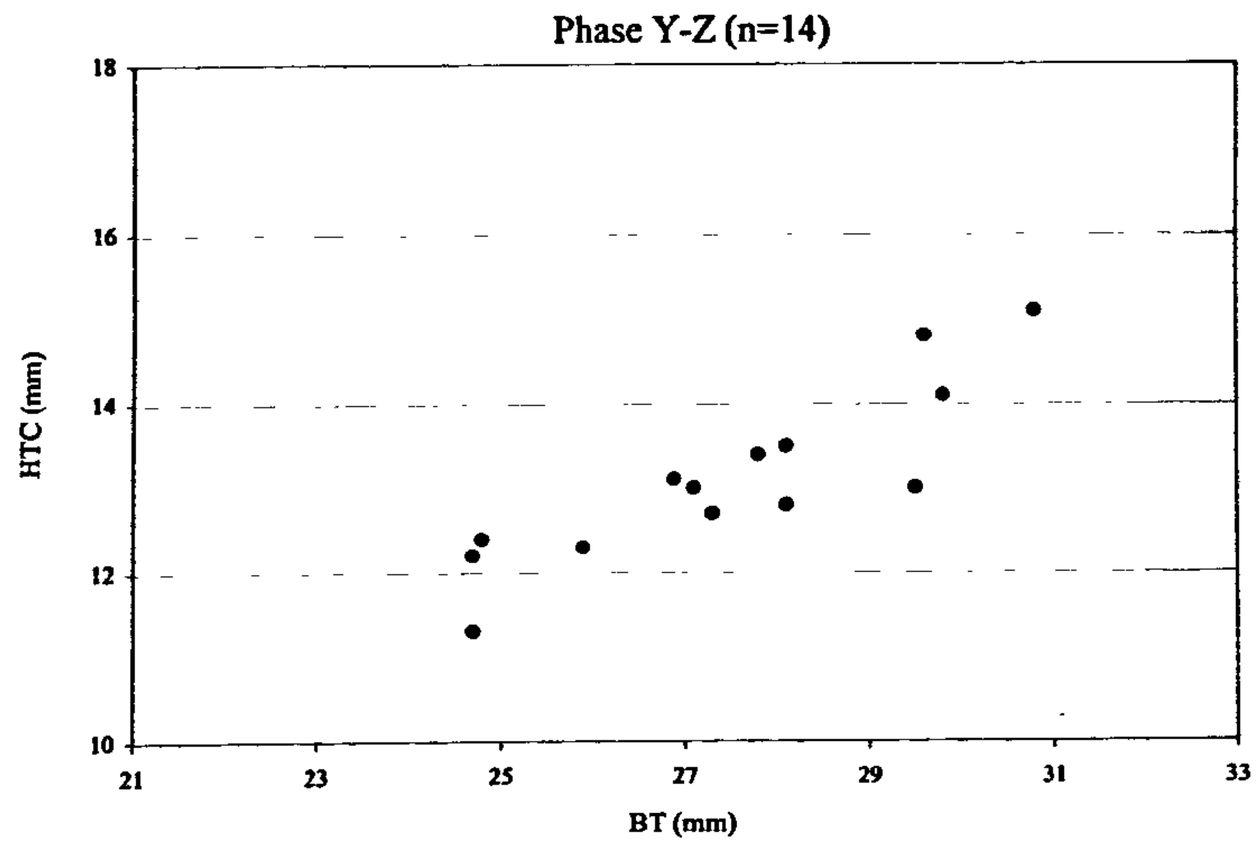


Figure 134. Sheep/goat: Biometry: Breed and/or sex: Humerus trochlea shape indices (BT by HTC) by chronological phase



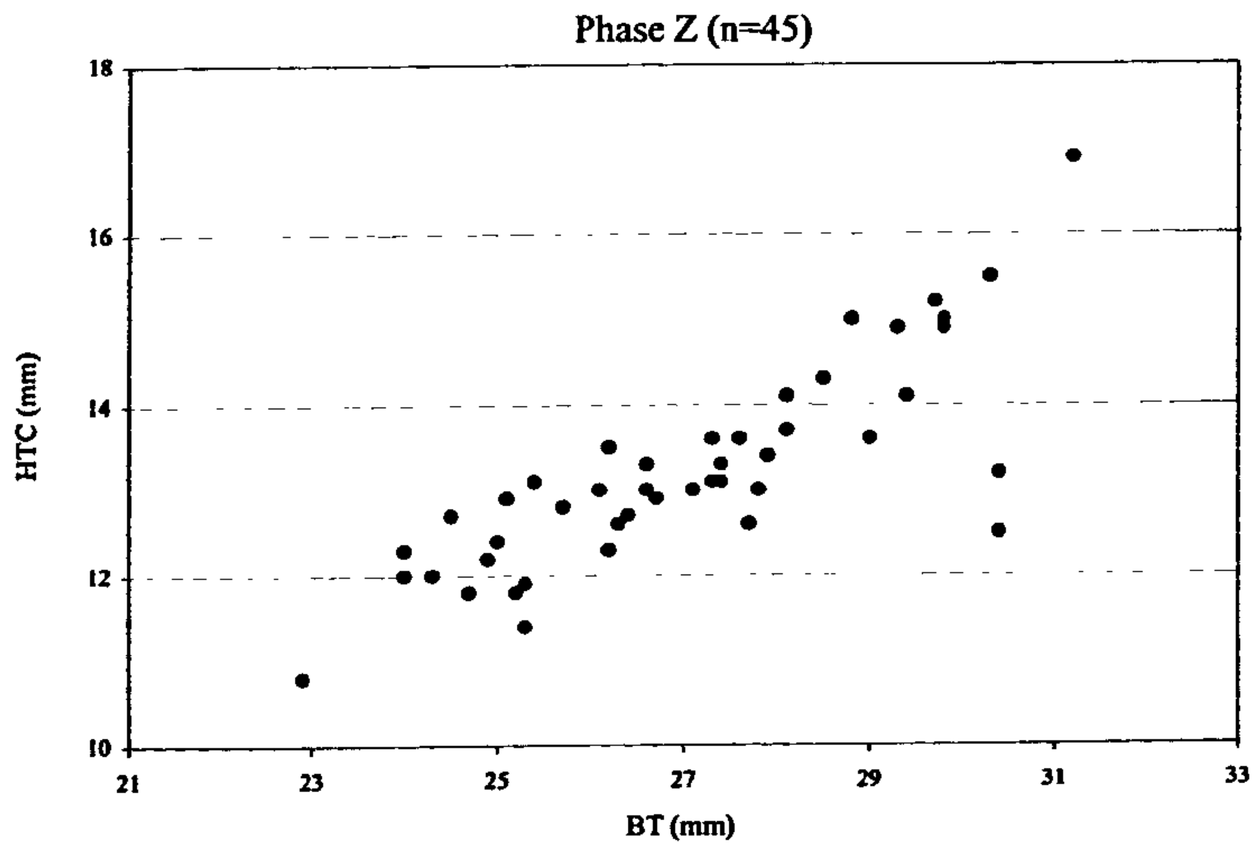
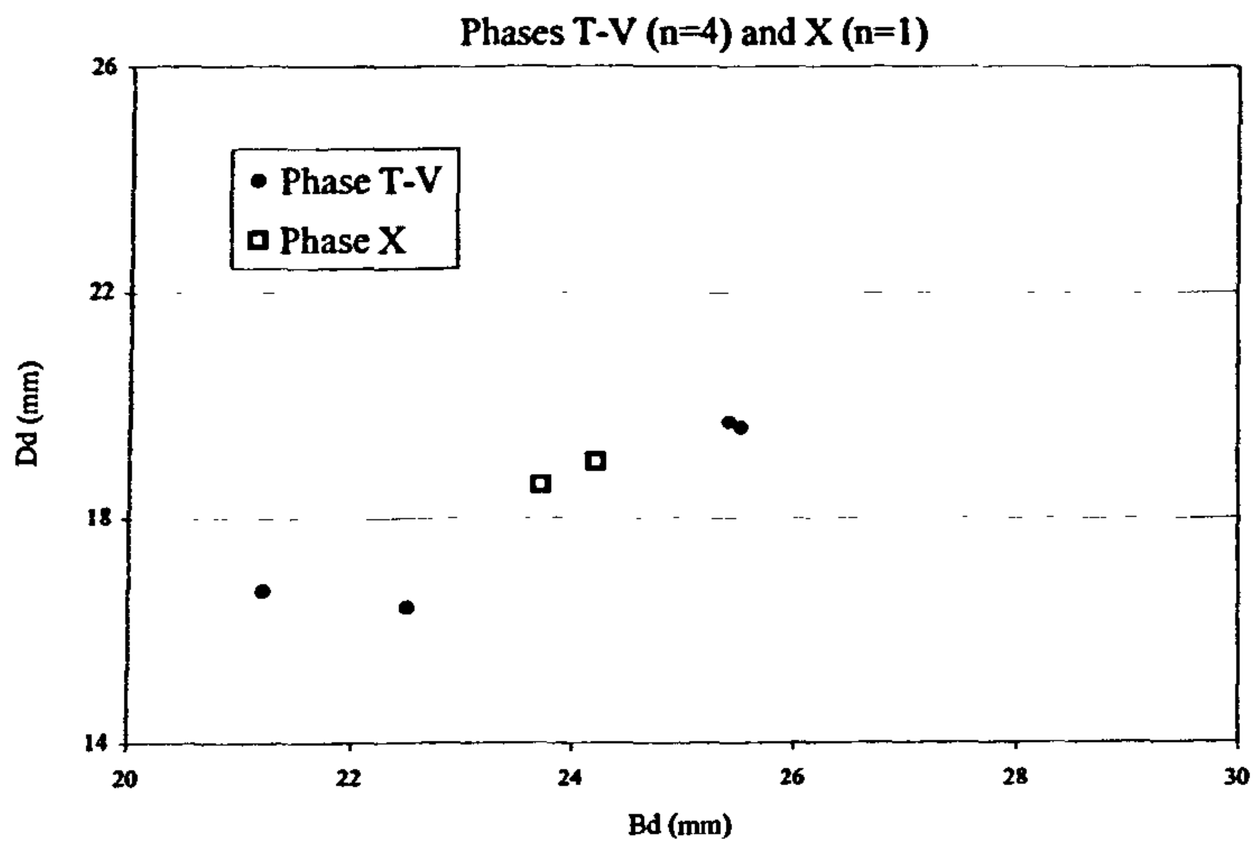
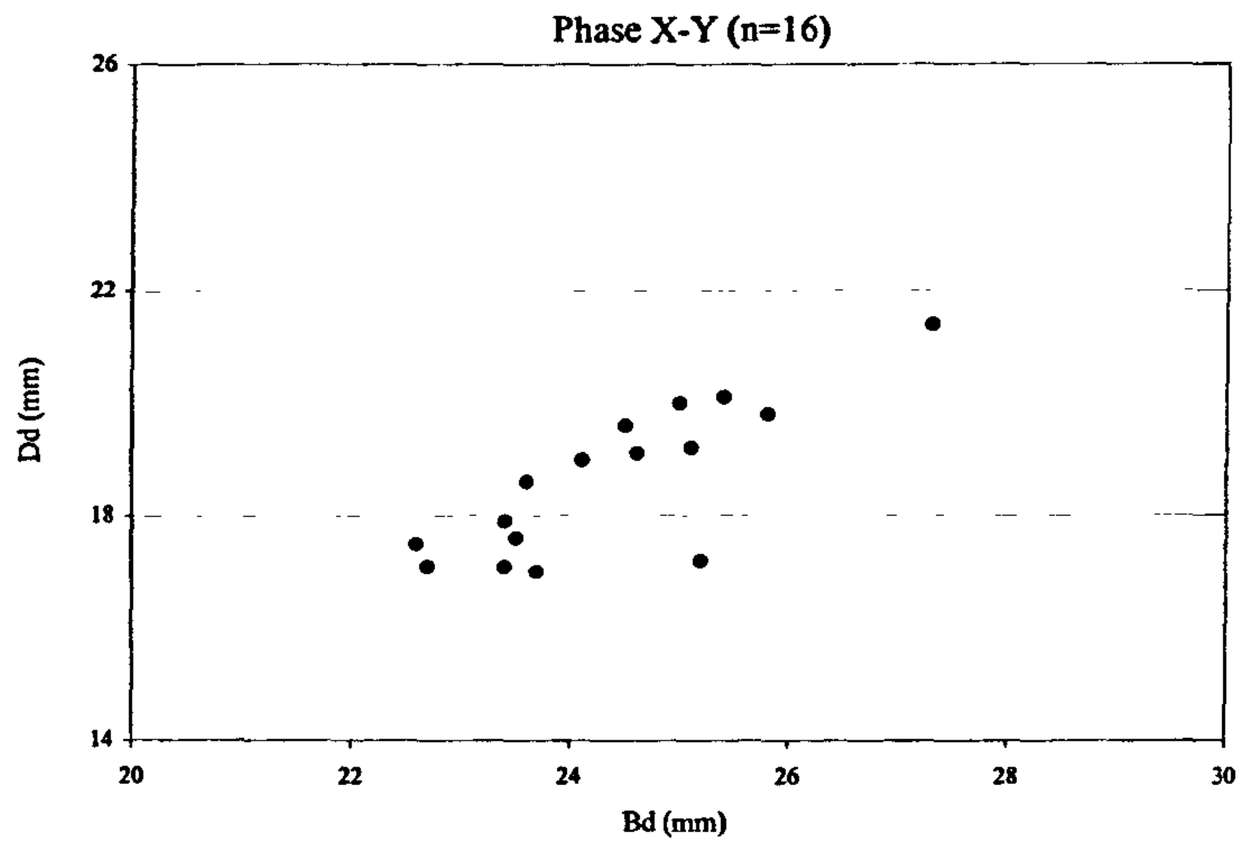
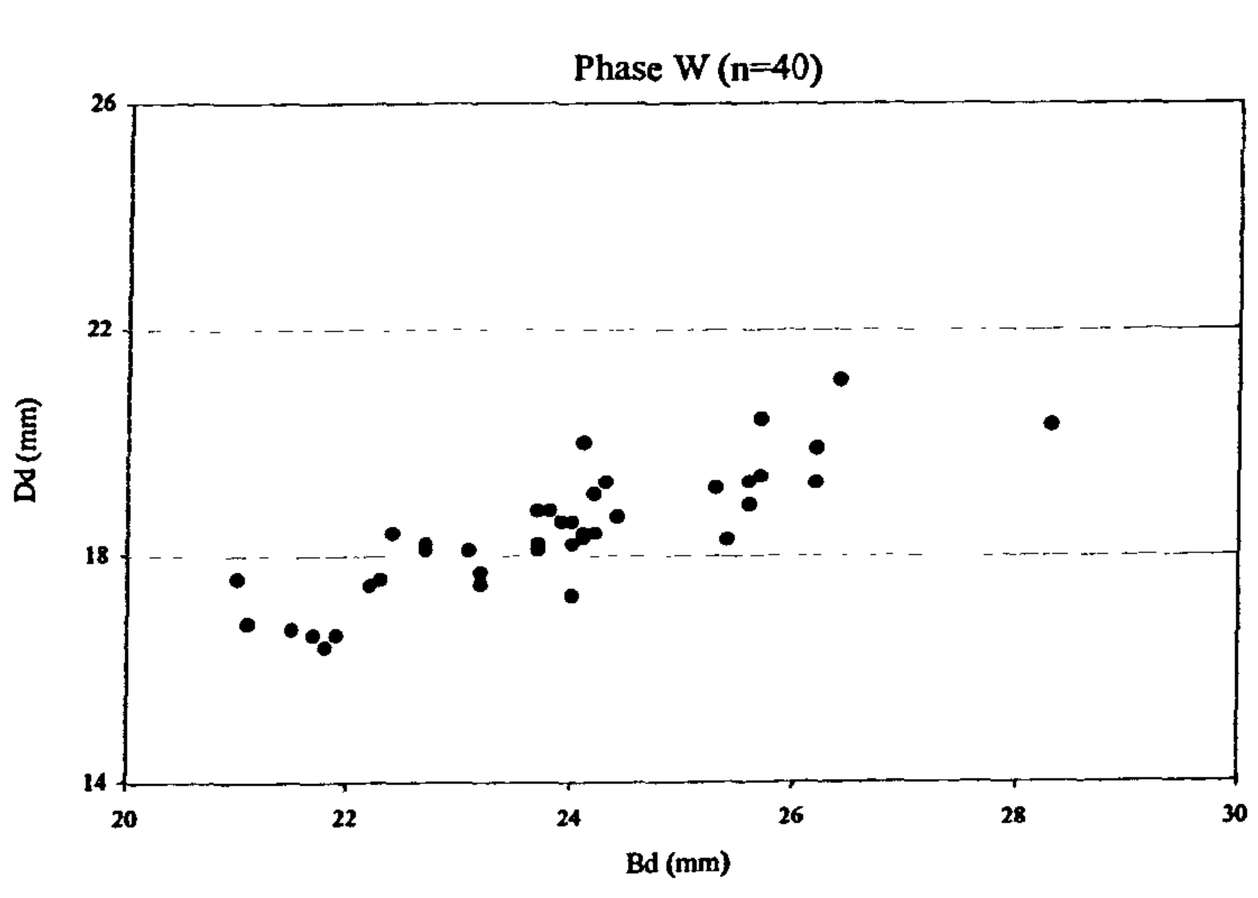


Figure 134 cont. Sheep/goat: Biometry: Breed and/or sex: Humerus trochlea shape indices (BT by HTC) by chronological phase







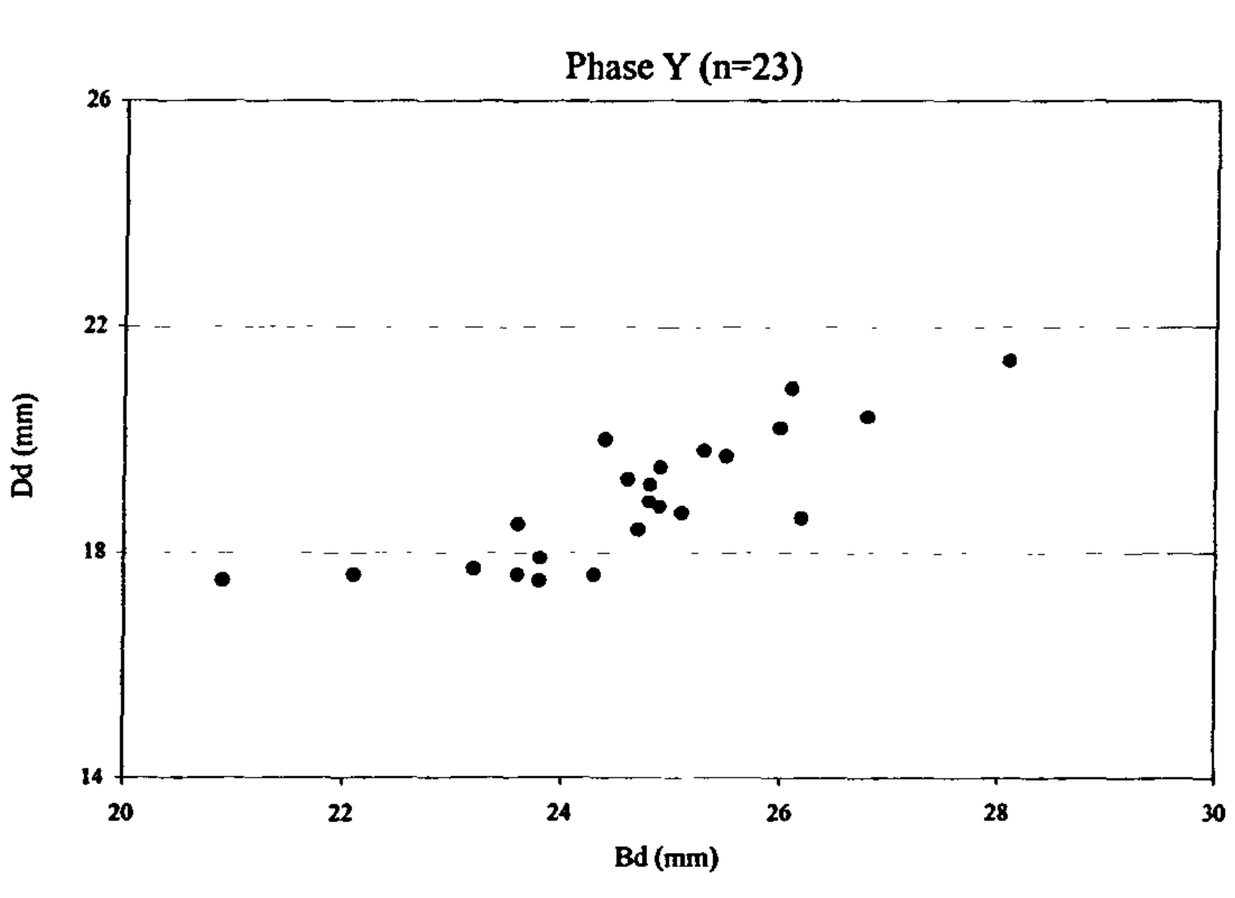
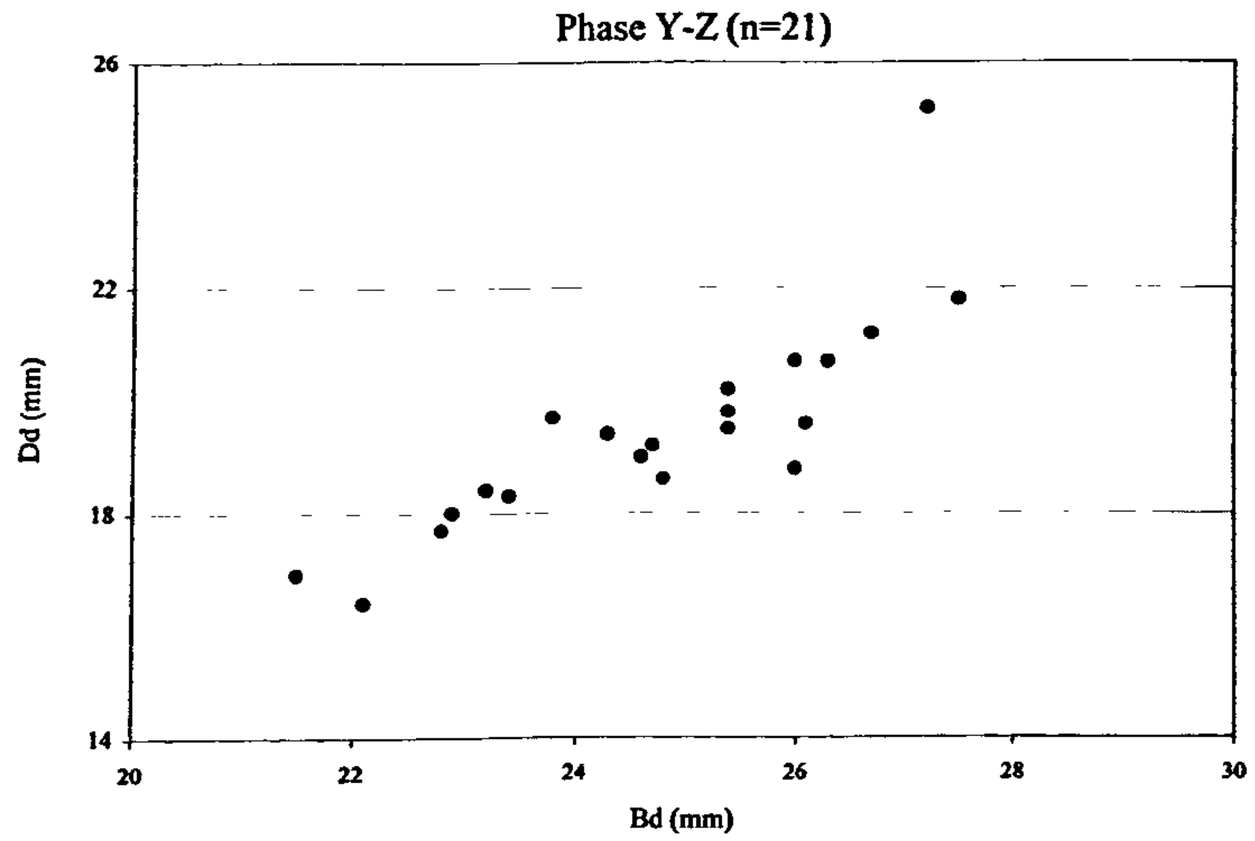


Figure 135. Sheep/goat: Biometry: Breed and/or sex: Distal tibia shape indices (Bd by Dd) by chronological phase



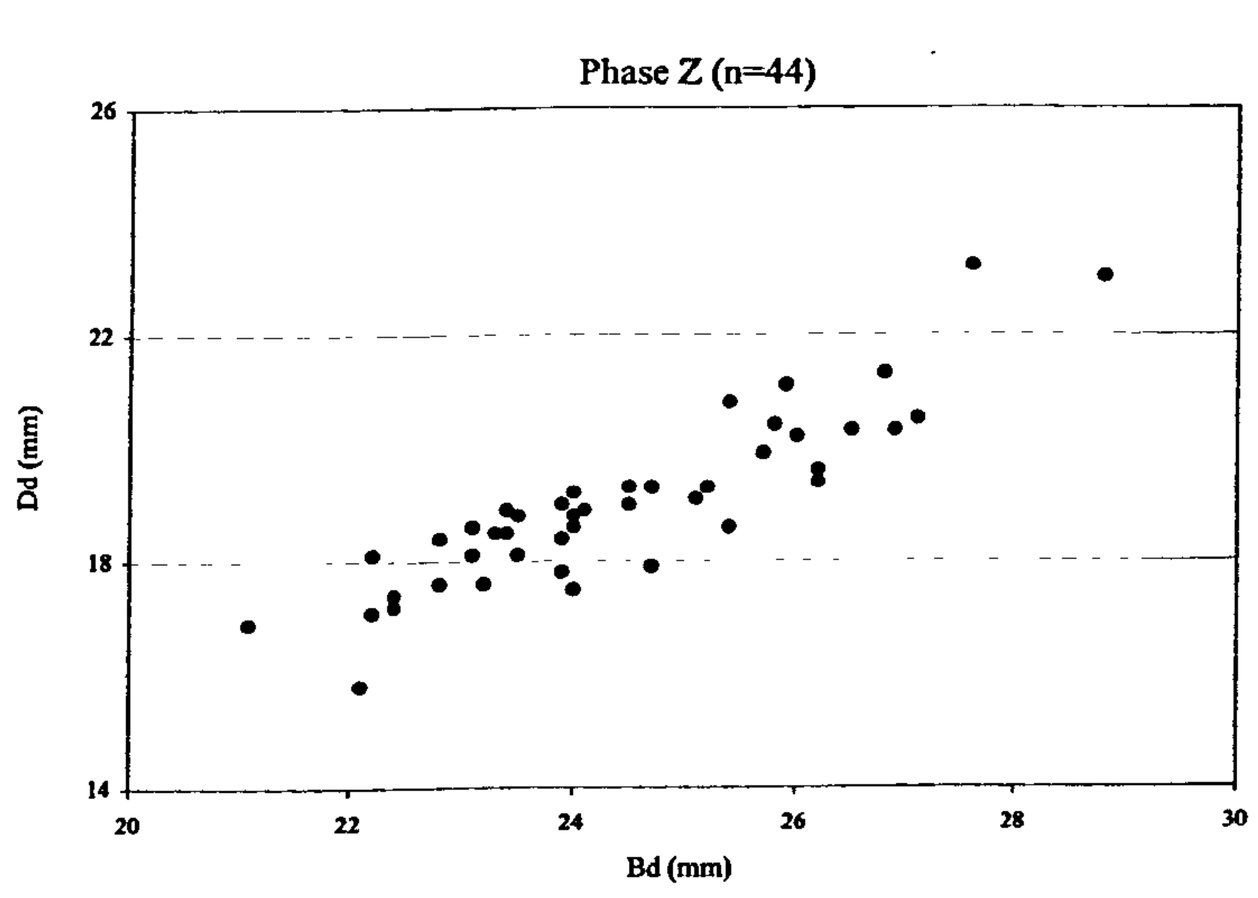
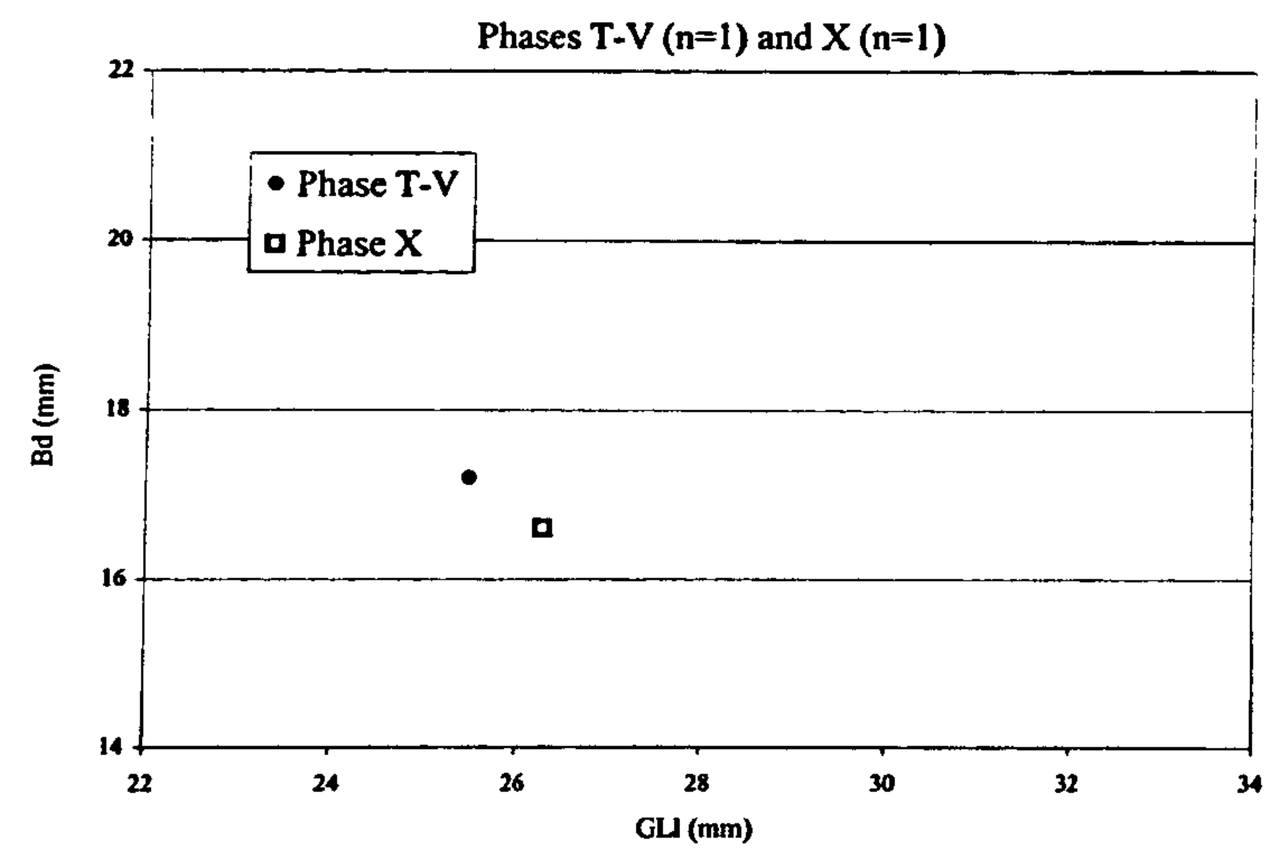
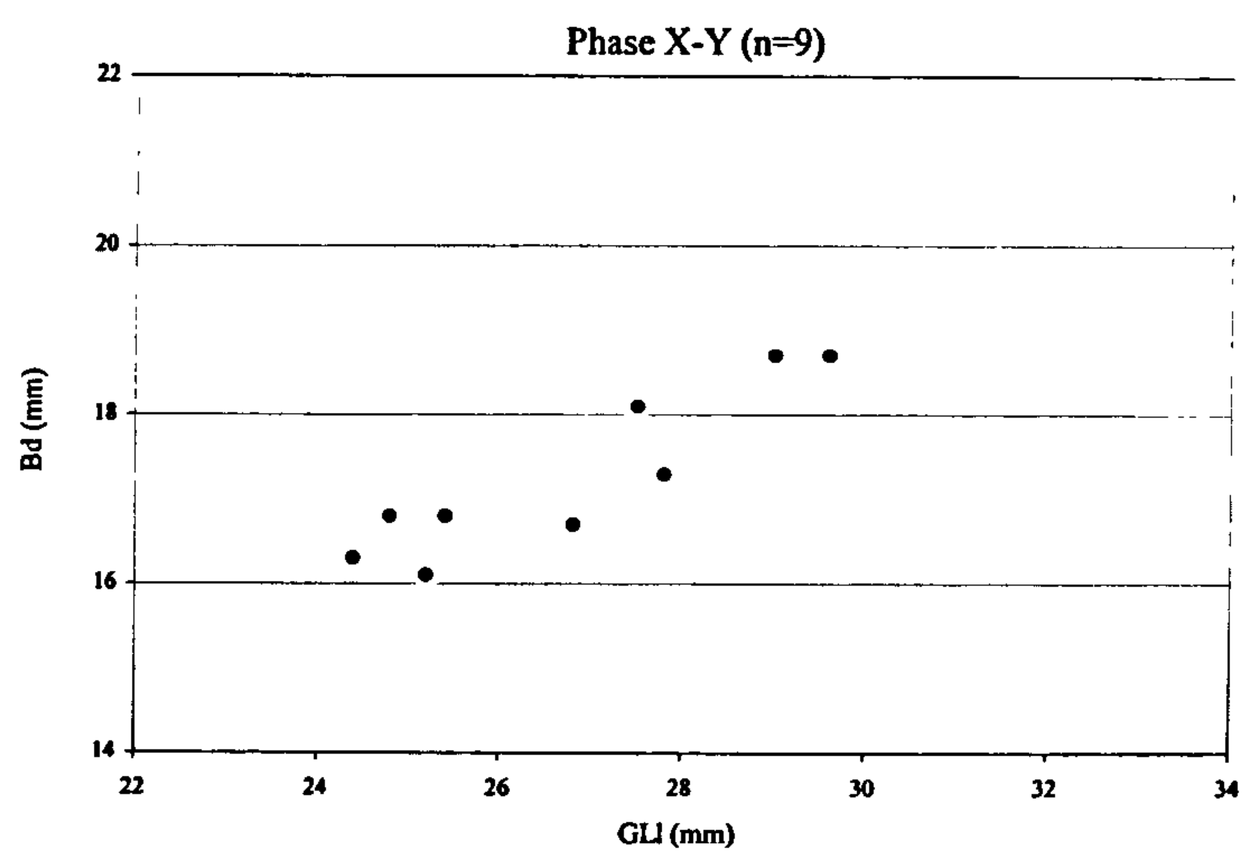
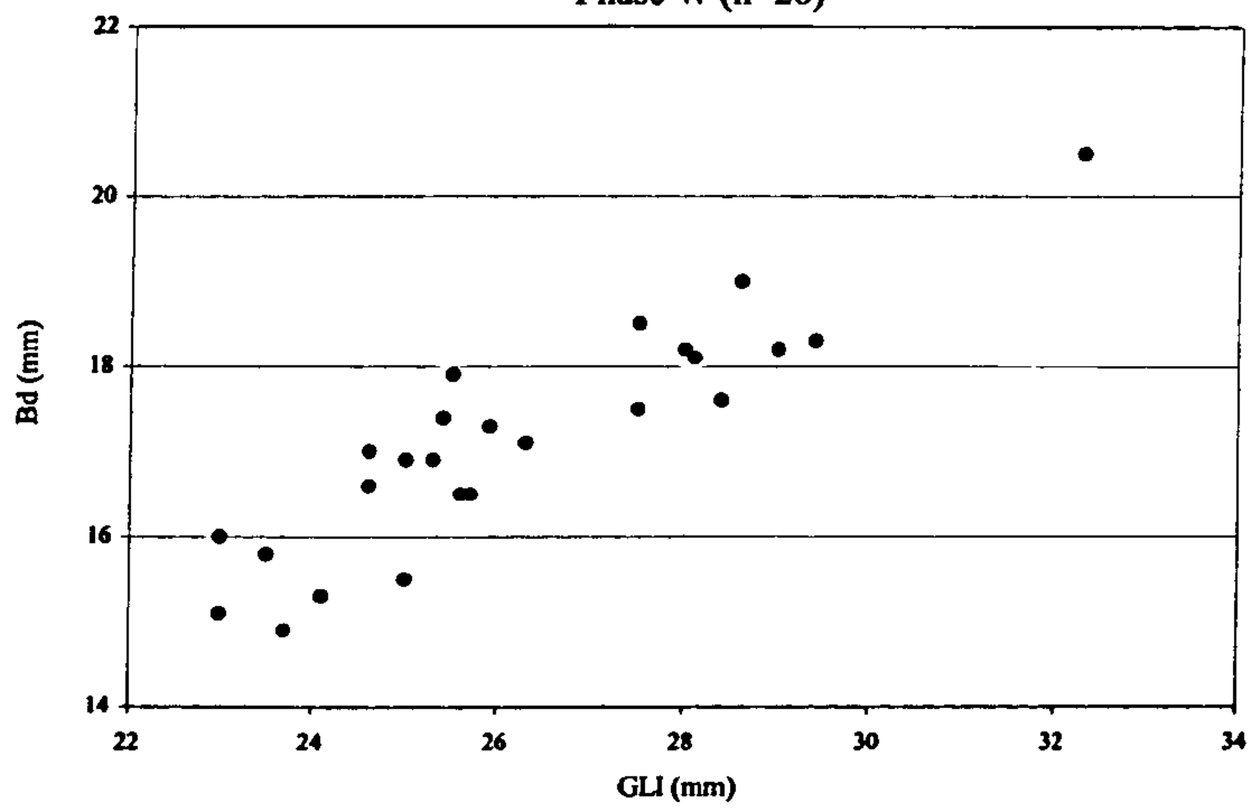


Figure 135 cont. Sheep/goat: Biometry: Breed and/or sex: Distal tibia shape indices (Bd by Dd) by chronological phase







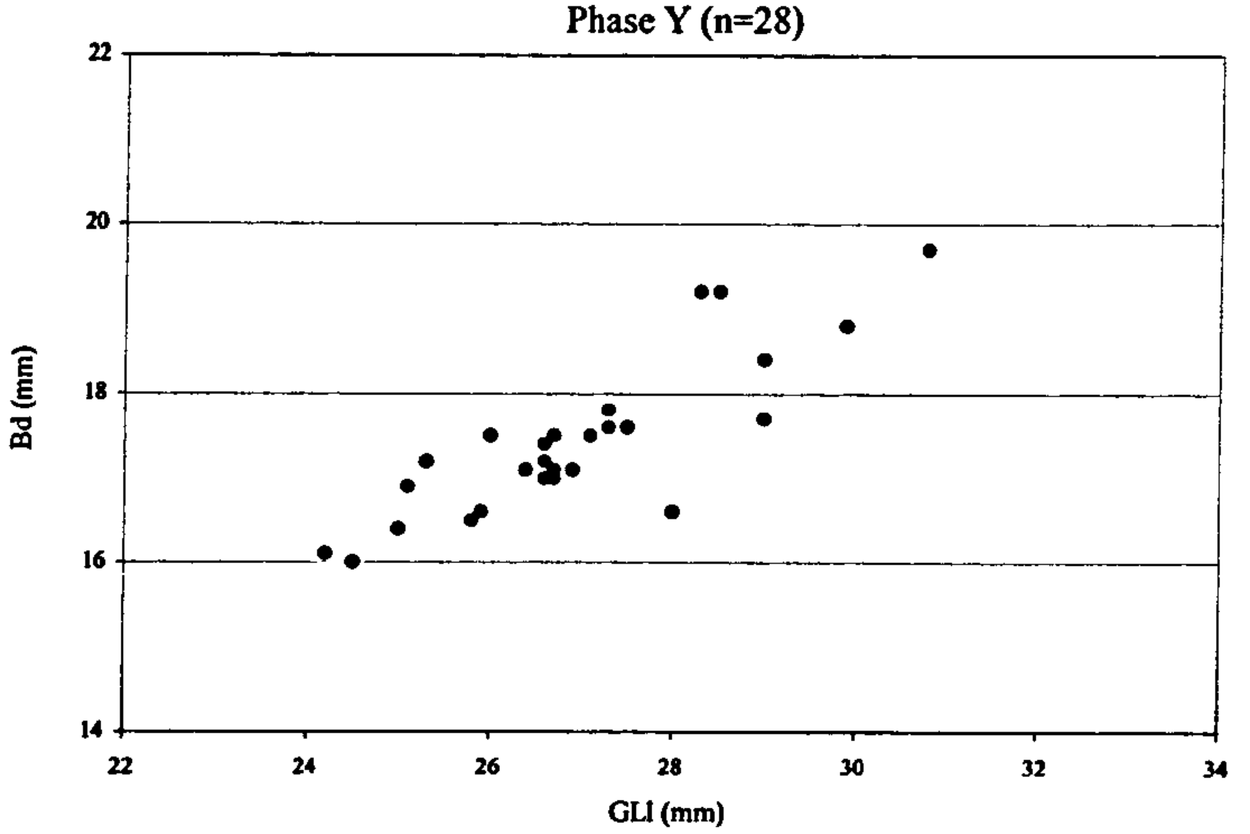


Figure 136. Sheep/goat: Biometry: Breed and/or sex: Astragalus shape indices (GLl by Bd) by chronological phase

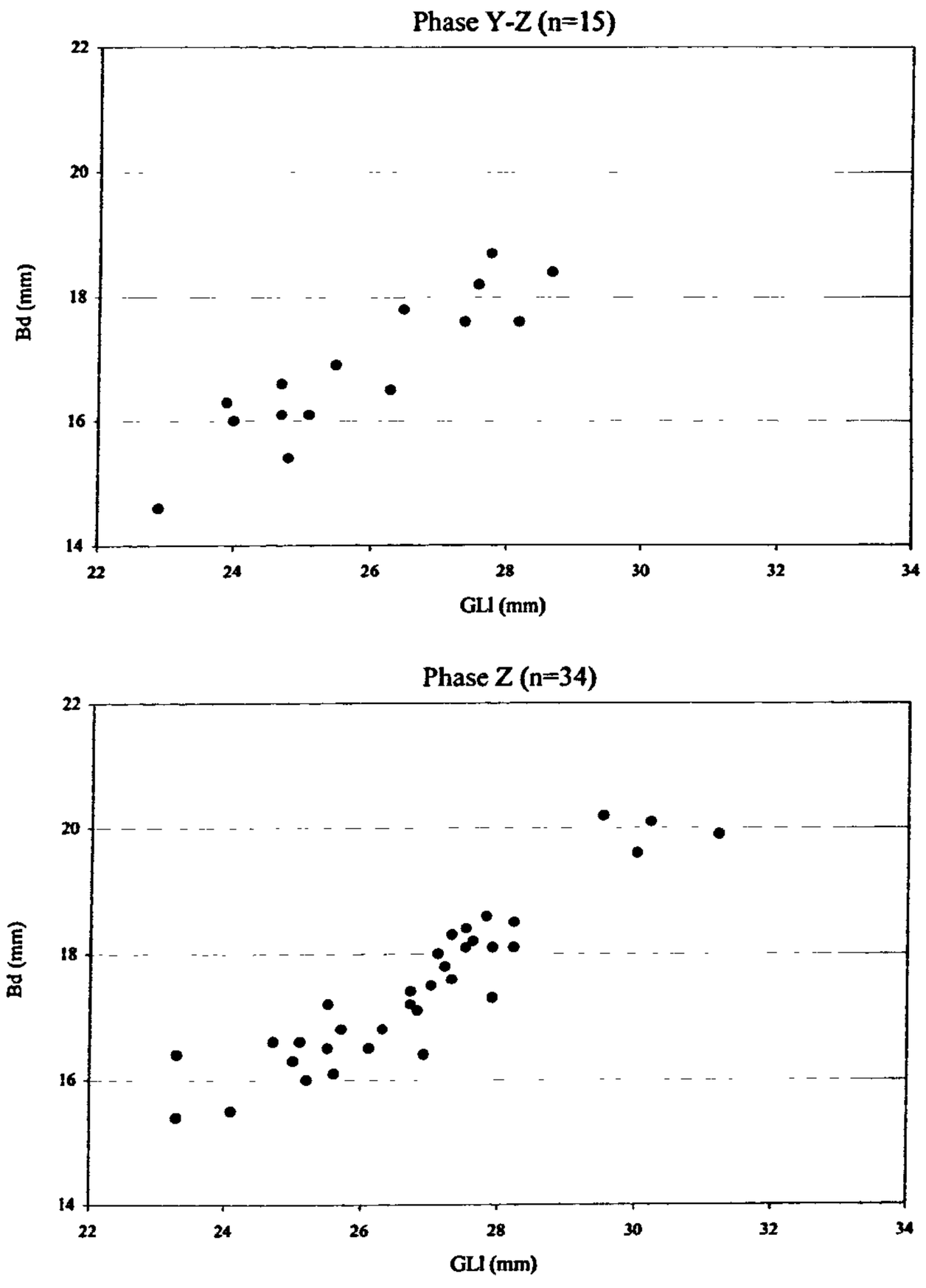


Figure 136 cont. Sheep/goat: Biometry: Breed and/or sex: Astragalus shape indices (GLl by Bd) by chronological phase

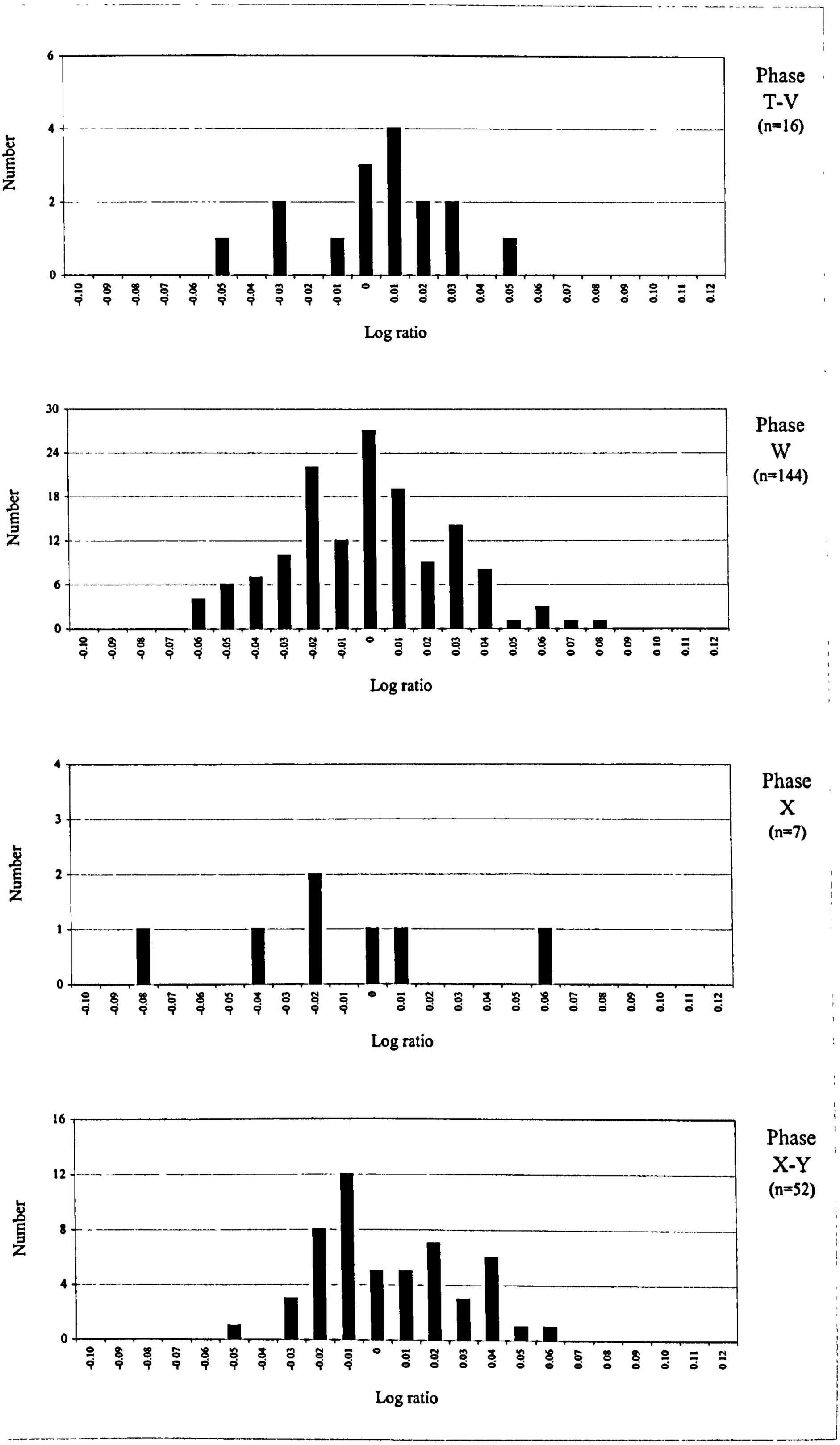


Figure 137. Sheep/goat: Biometry: Log ratios: Inter-site comparison: *Viroconium* widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

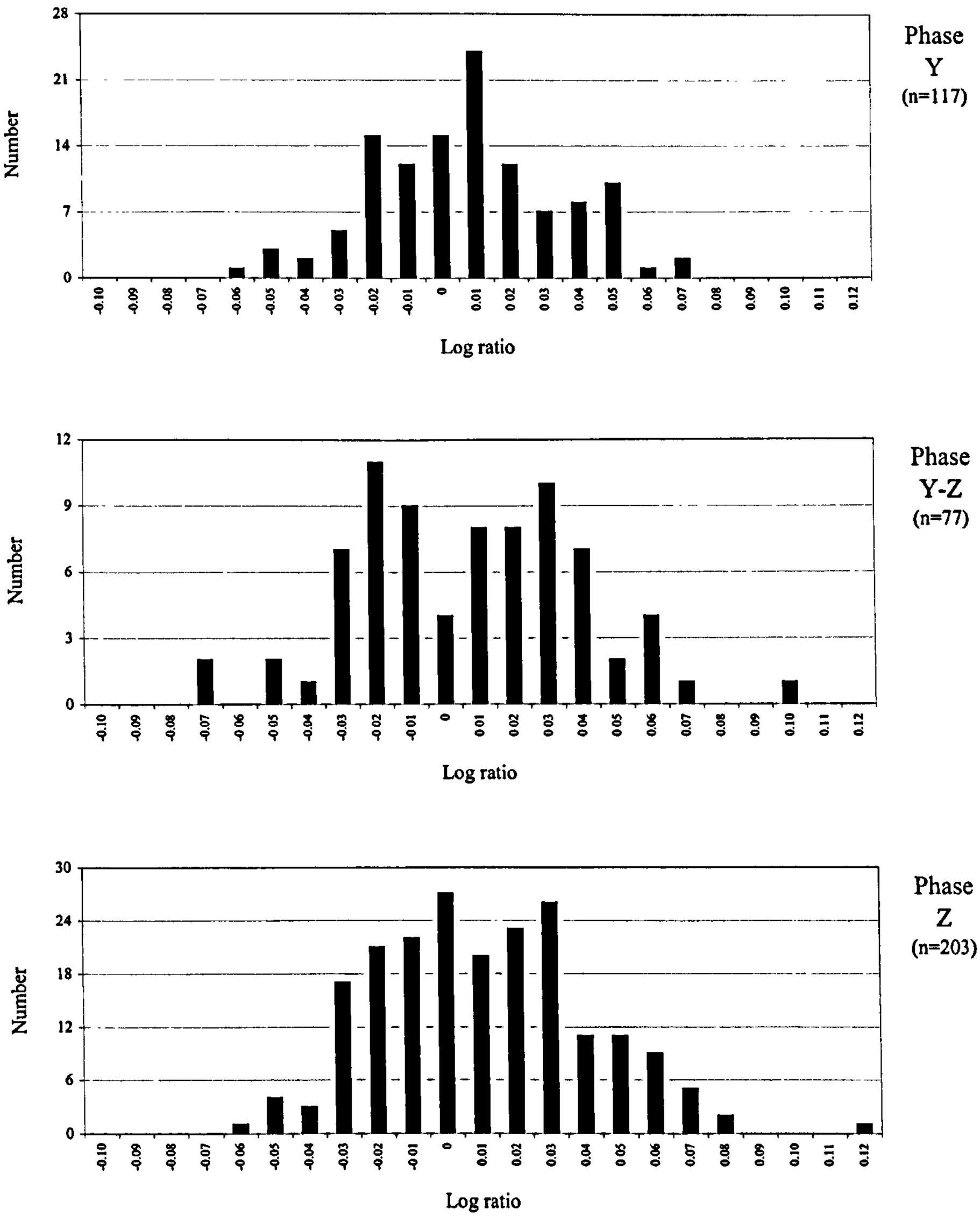


Figure 137 cont. Sheep/goat: Biometry: Log ratios: Inter-site comparison: *Viroconium* widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

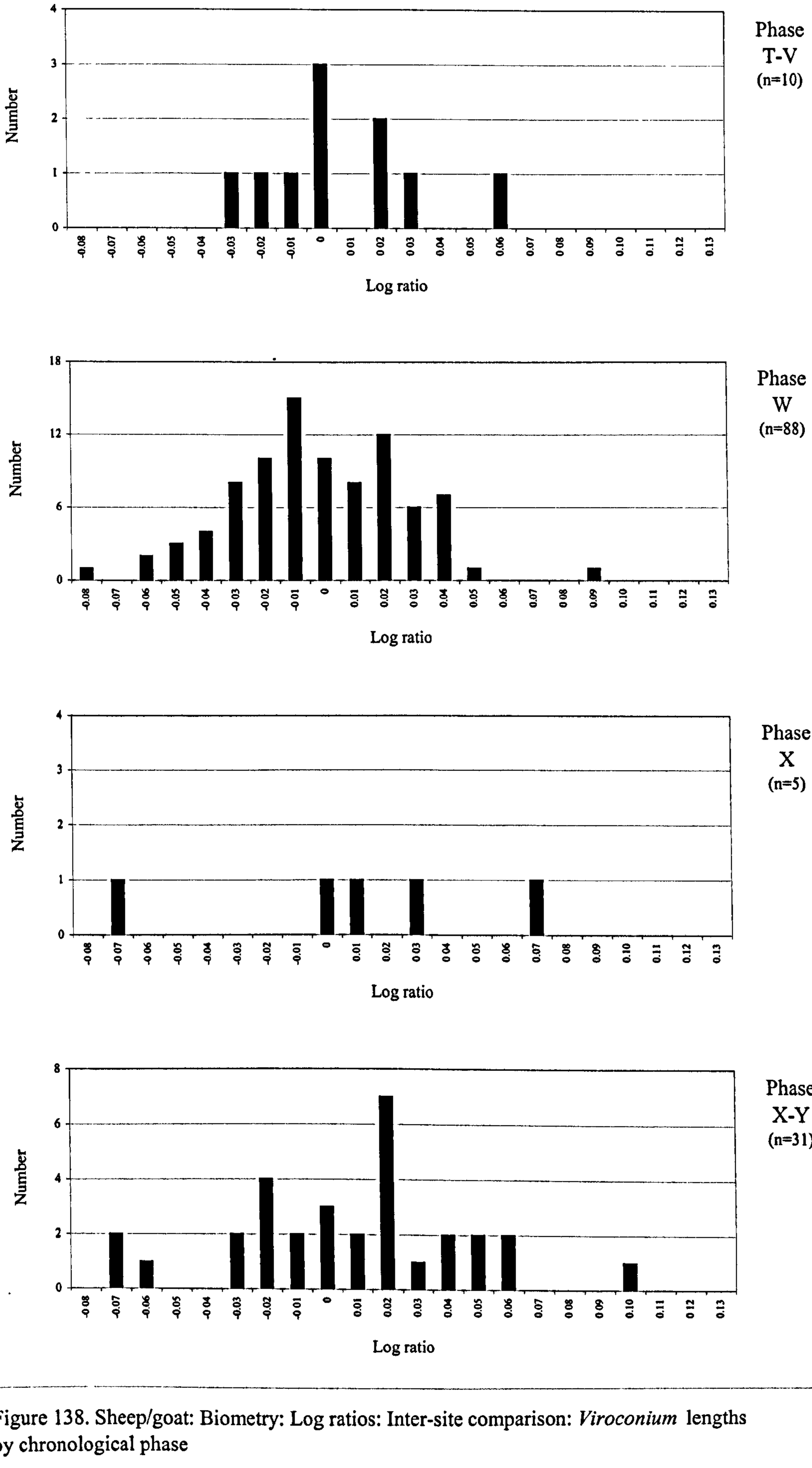


Figure 138. Sheep/goat: Biometry: Log ratios: Inter-site comparison: *Viroconium* lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

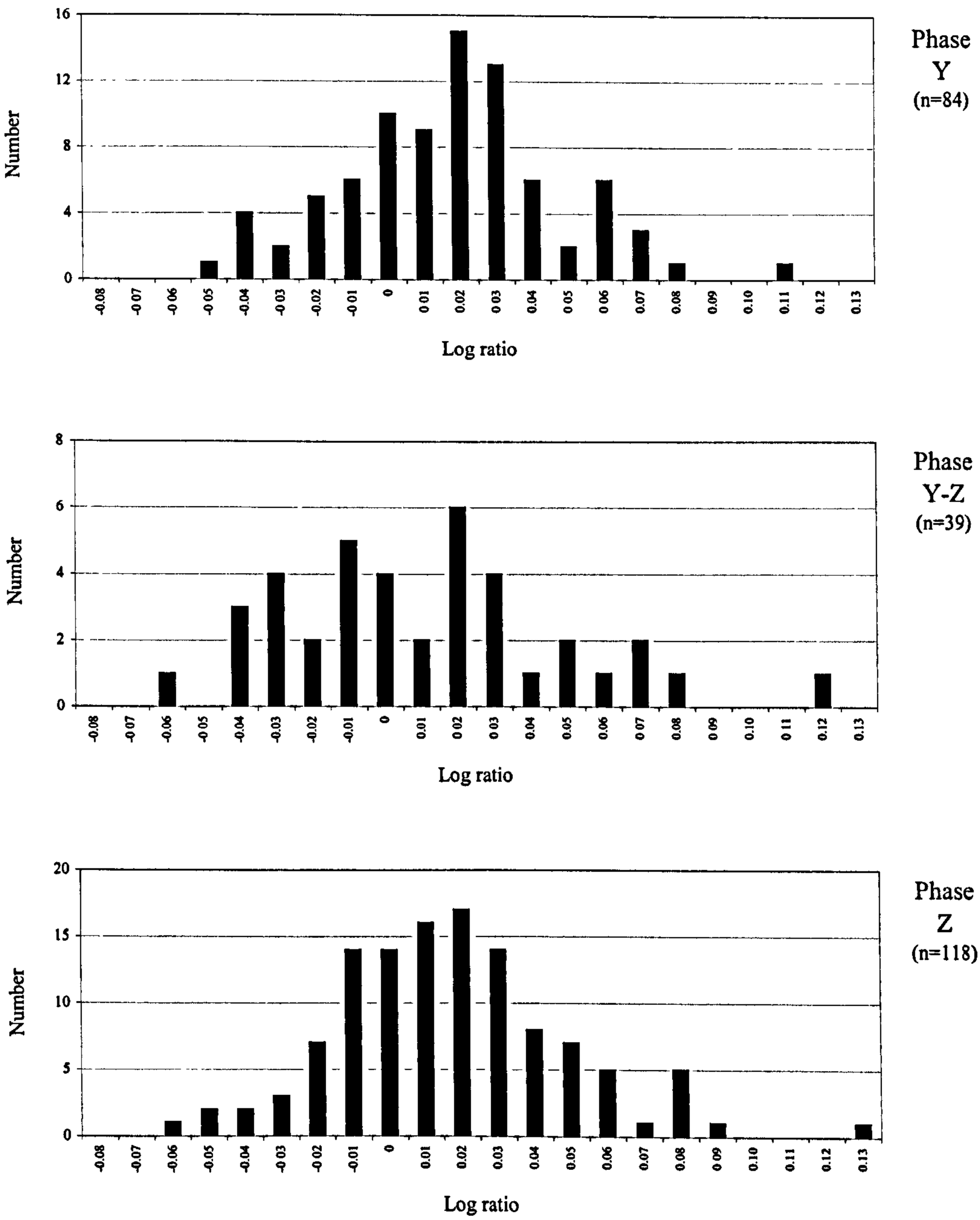


Figure 138 cont. Sheep/goat: Biometry: Log ratios: Inter-site comparison: *Viroconium* lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

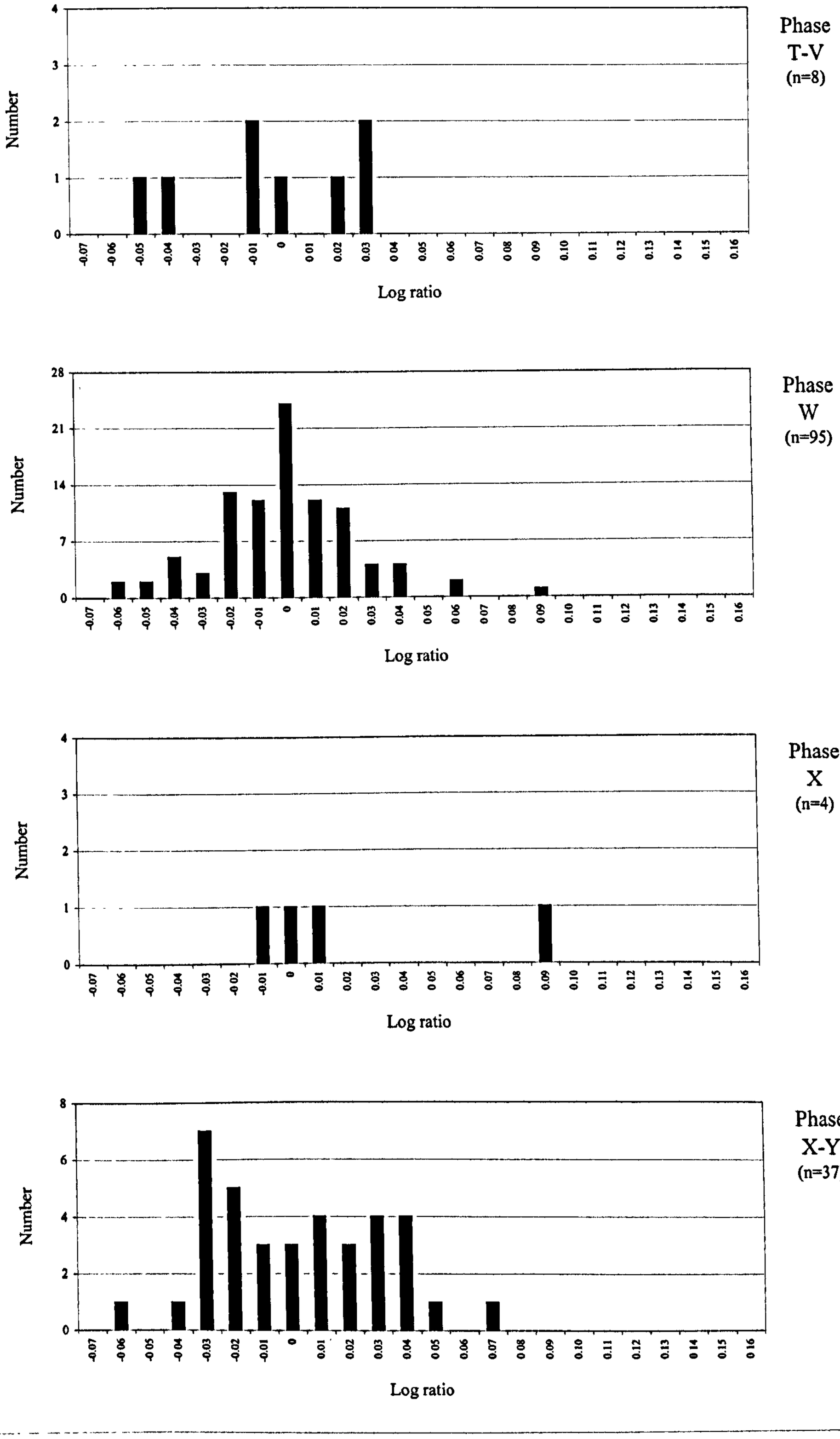


Figure 139. Sheep/goat: Biometry: Log ratios: Inter-site comparison: *Viroconium* depths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

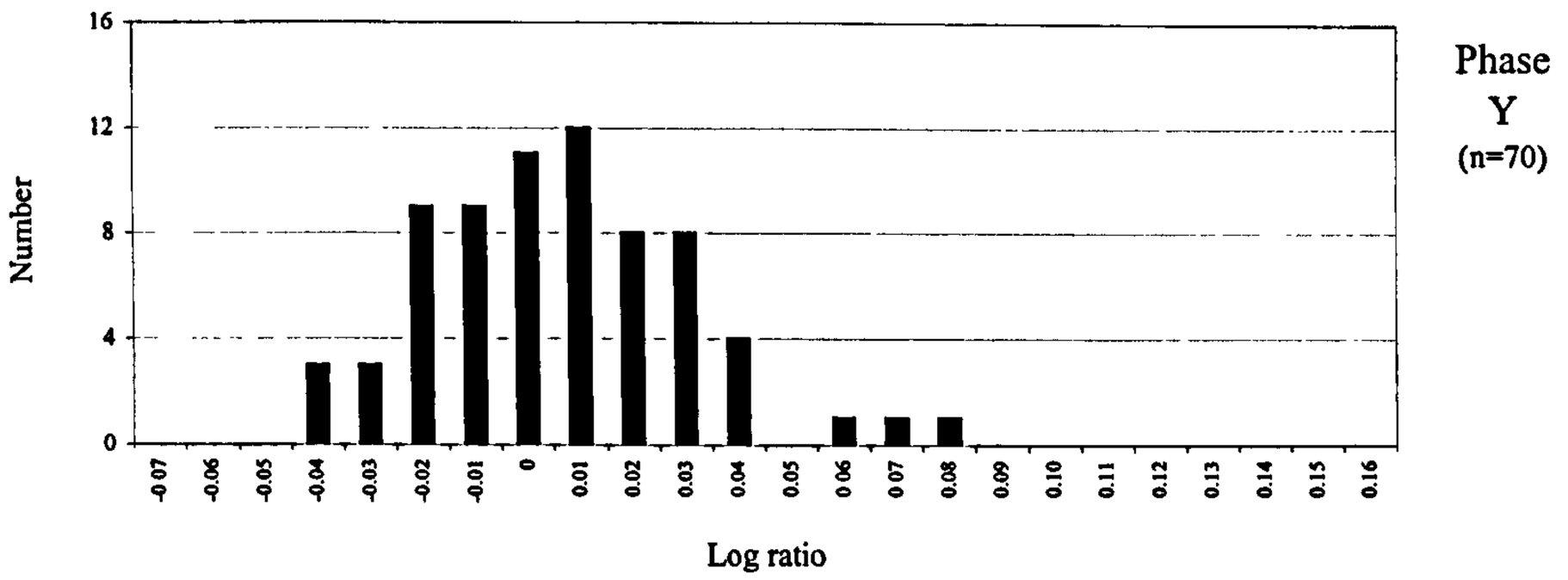


Figure 139 cont. Sheep/goat: Biometry: Log ratios: Inter-site comparison: *Viroconium* depths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

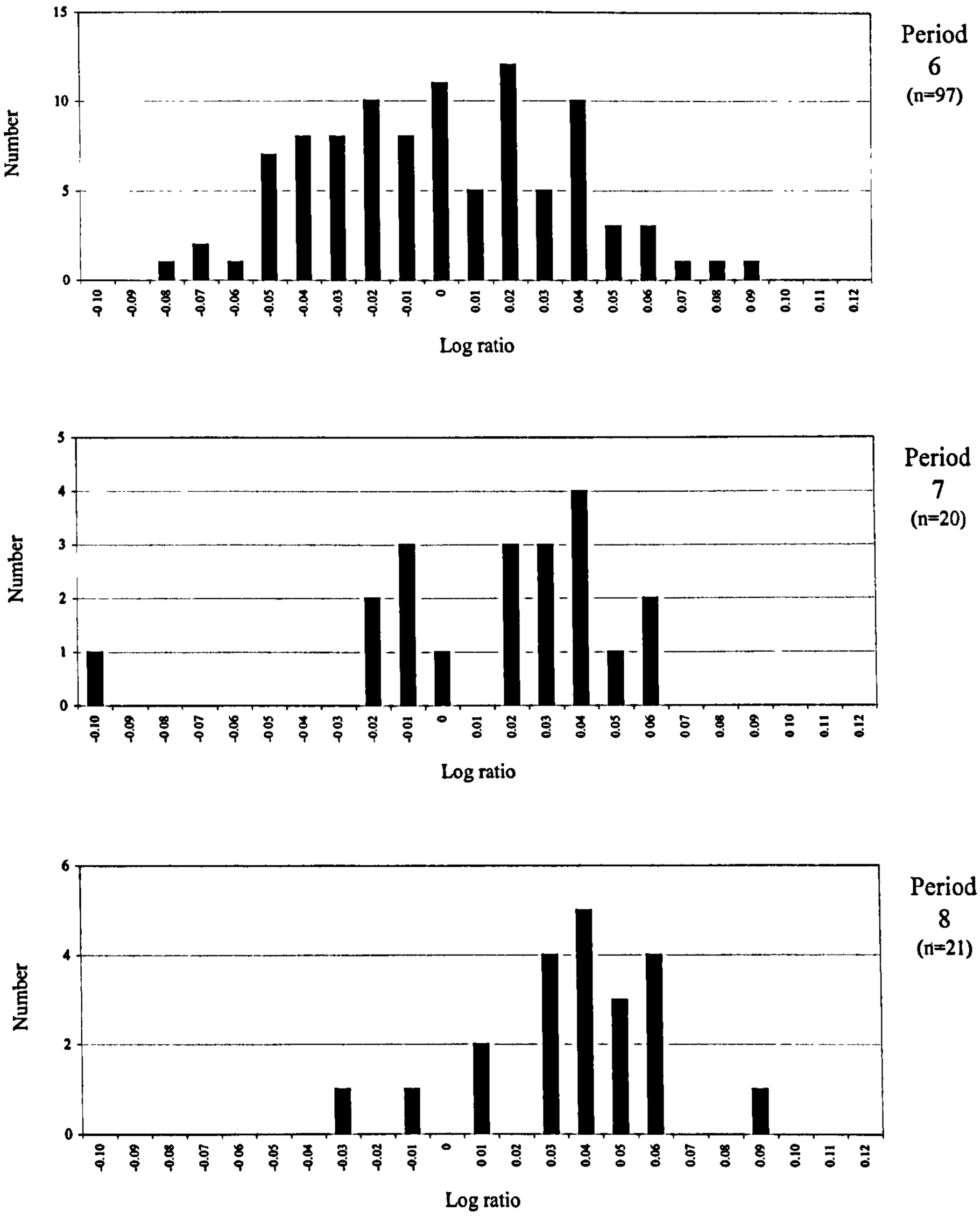


Figure 140. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Colchester widths by chronological period (Luff 1993: 183-197, Microfiche)

NB. '0' represents the standard value: *Viroconium* Phase W average

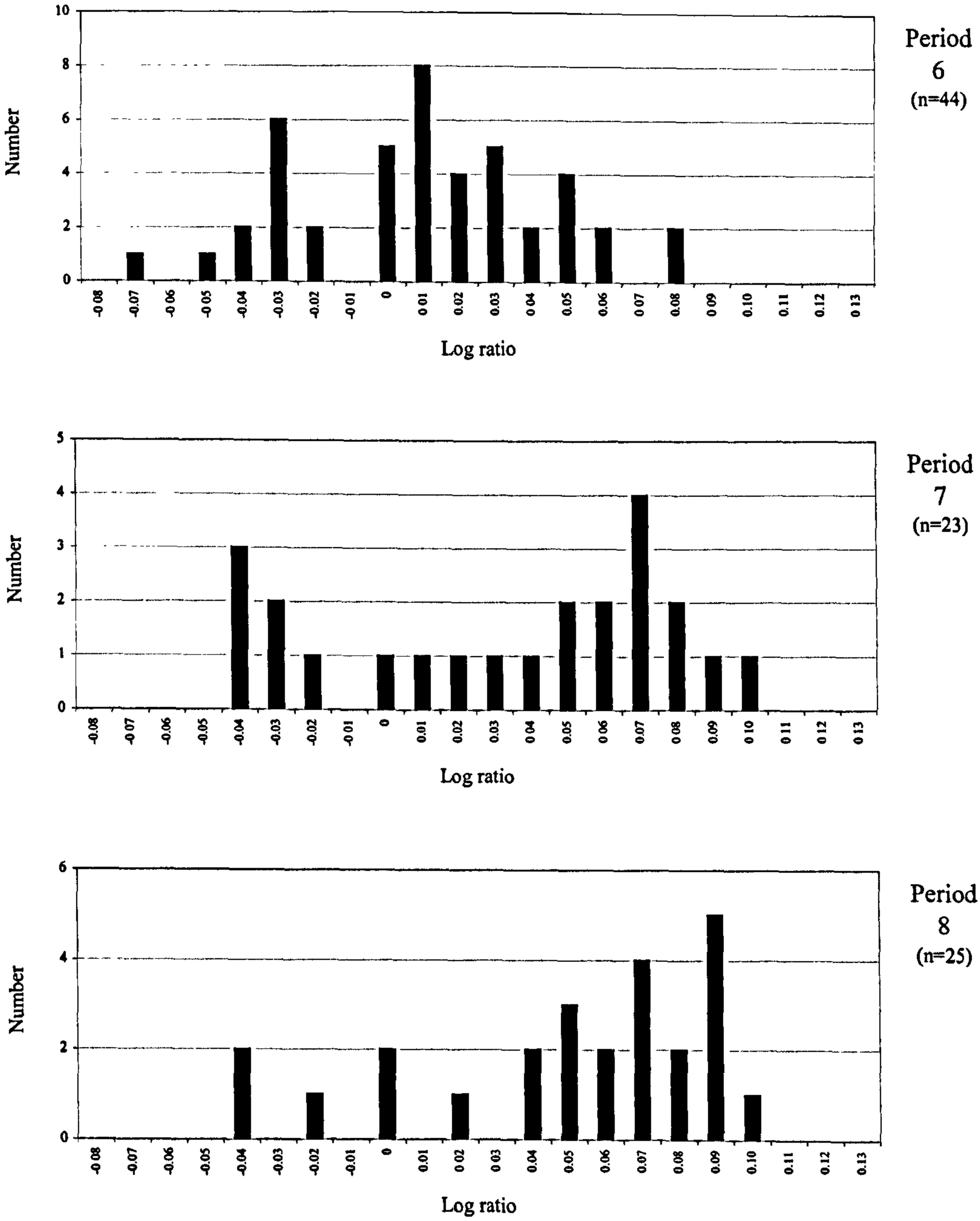


Figure 141. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Colchester lengths by chronological period (Luff 1993: 183-197, Microfiche)

NB. '0' represents the standard value: *Viroconium* Phase W average

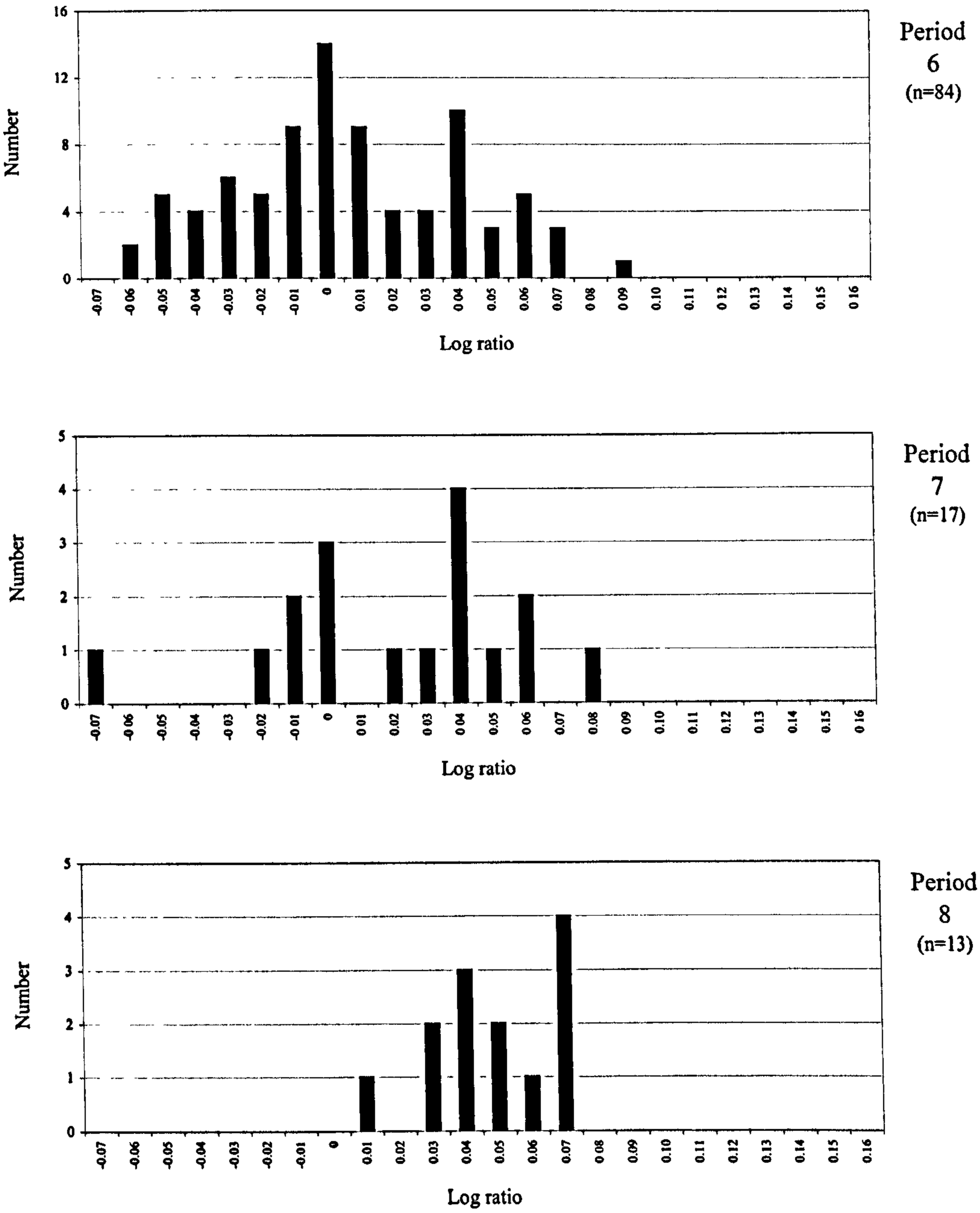


Figure 142. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Colchester depths by chronological period (Luff 1993: 183-197, Microfiche)

NB. '0' represents the standard value: *Viroconium* Phase W average

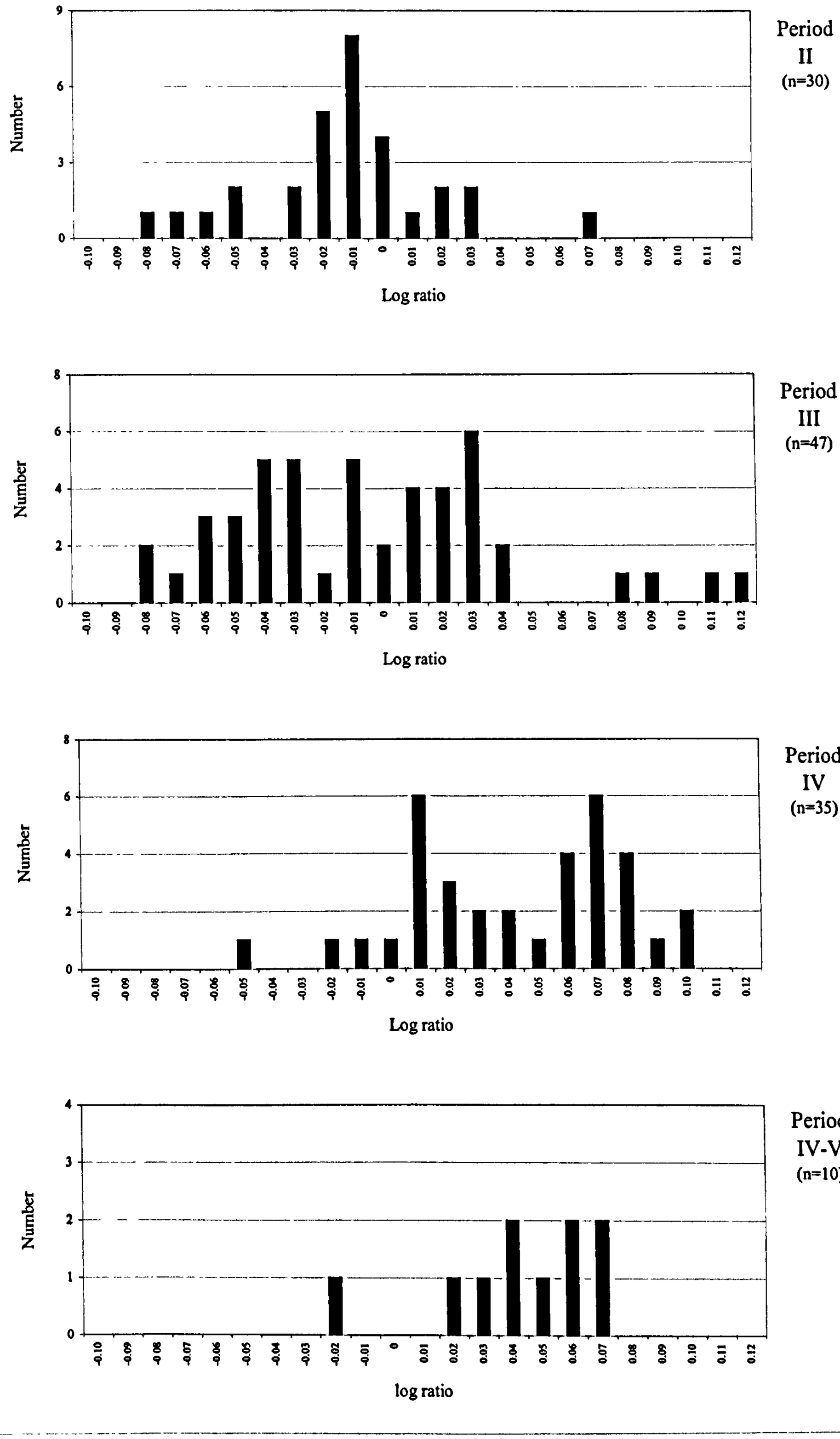


Figure 143. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Elms Farm widths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

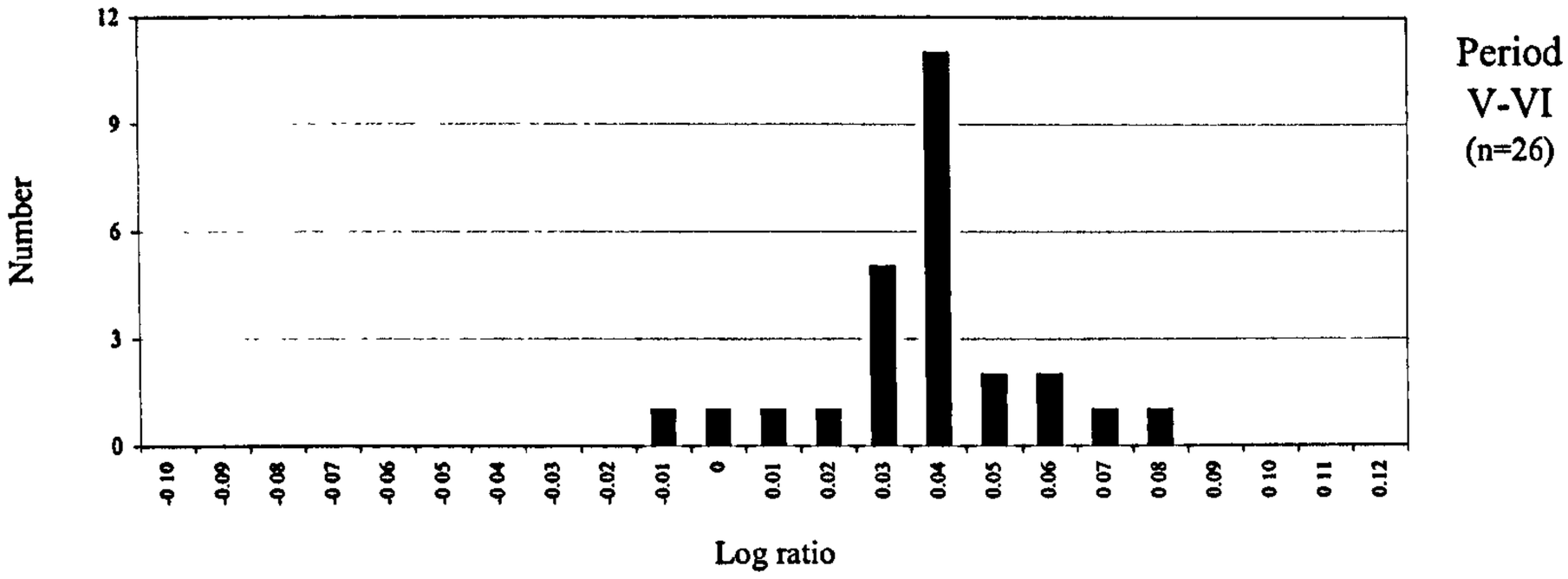


Figure 143 cont. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Elms Farm widths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

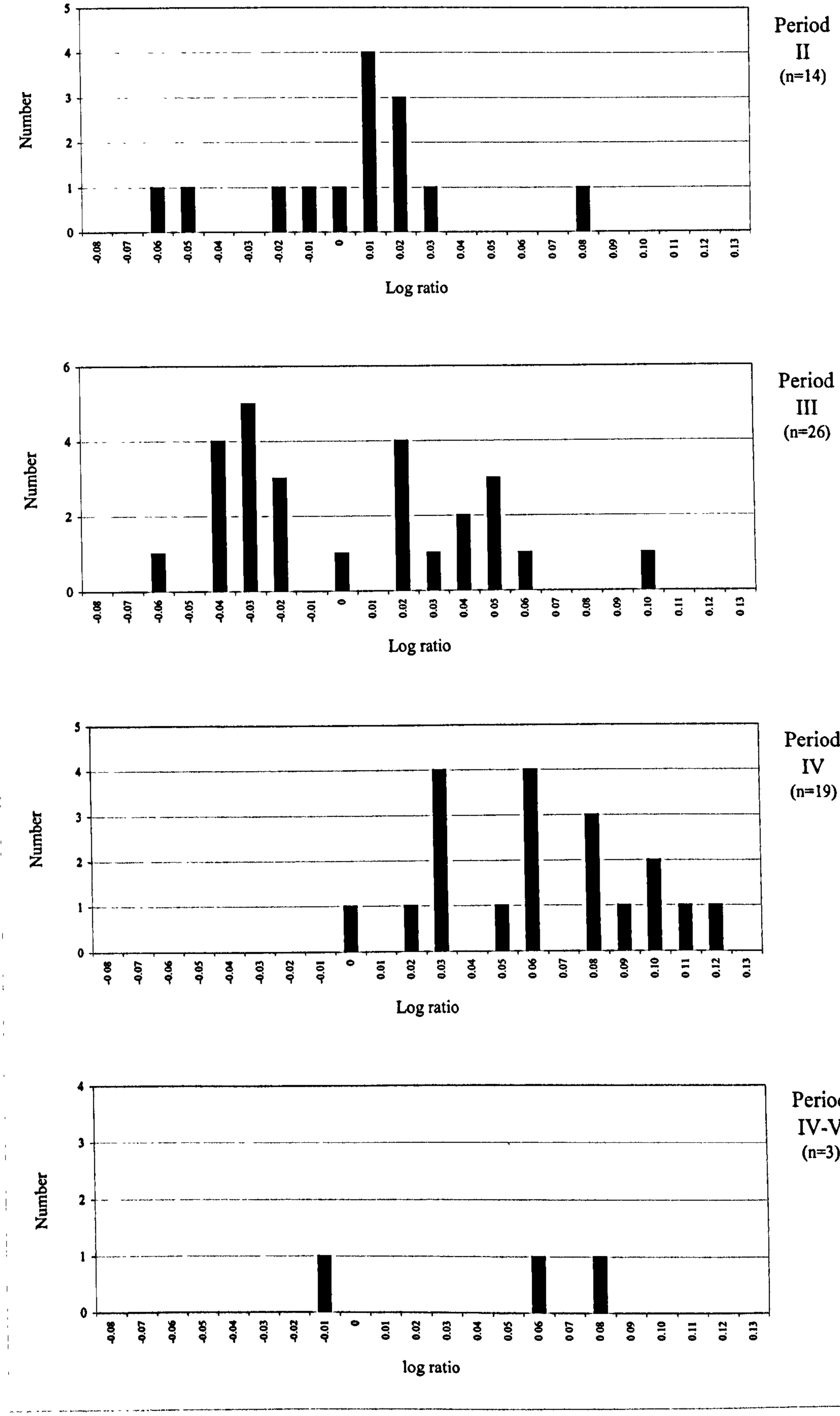


Figure 144. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Elms Farm lengths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

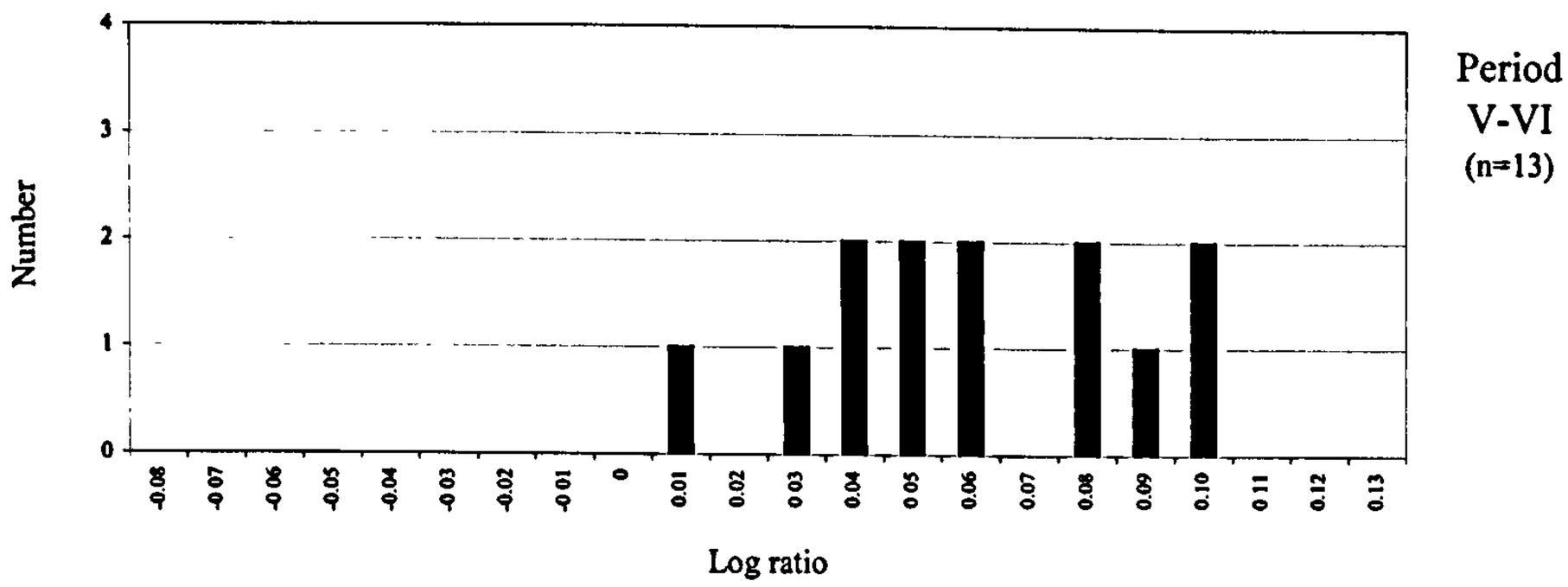


Figure 144 cont. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Elms Farm lengths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

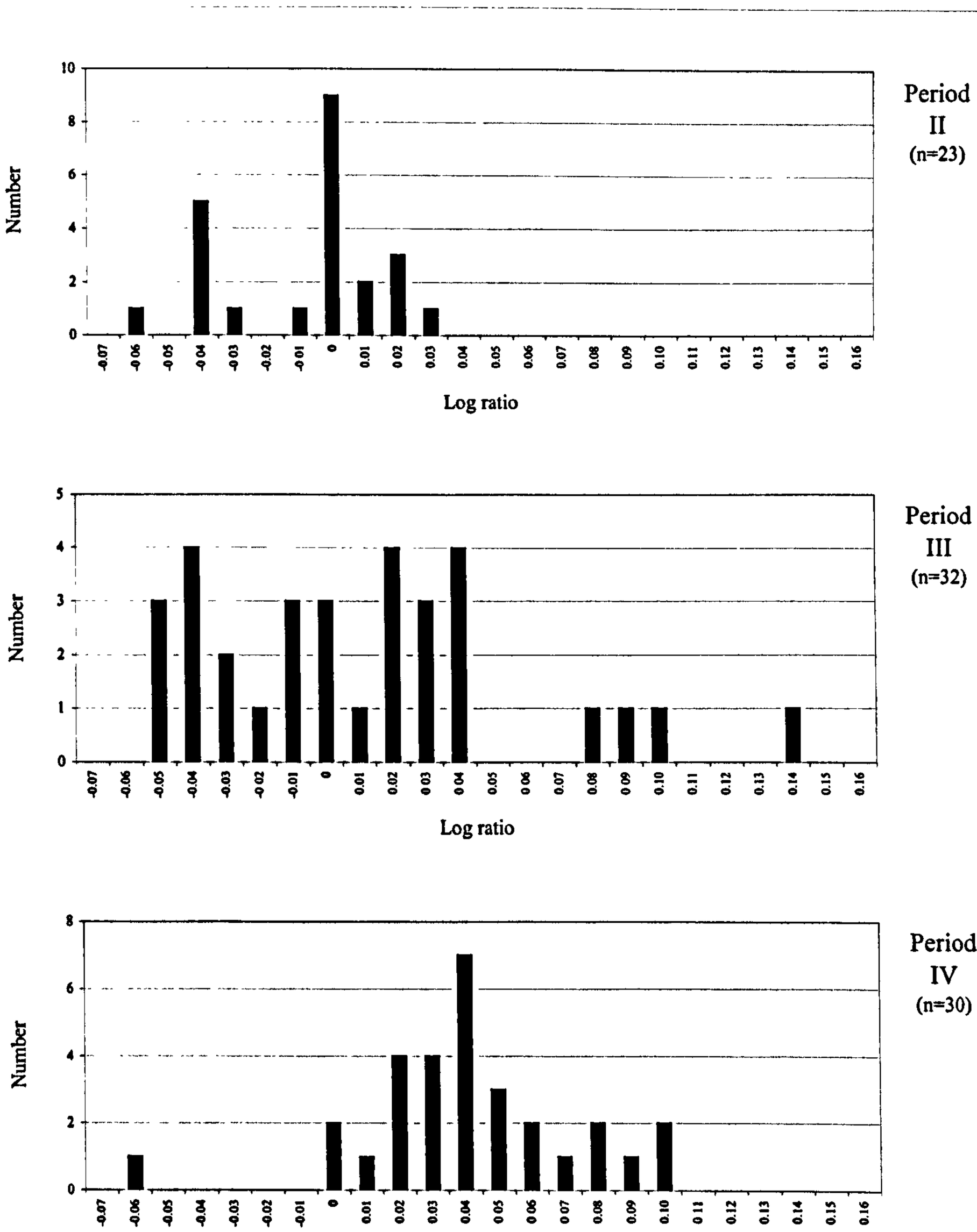


Figure 145. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Elms Farm depths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

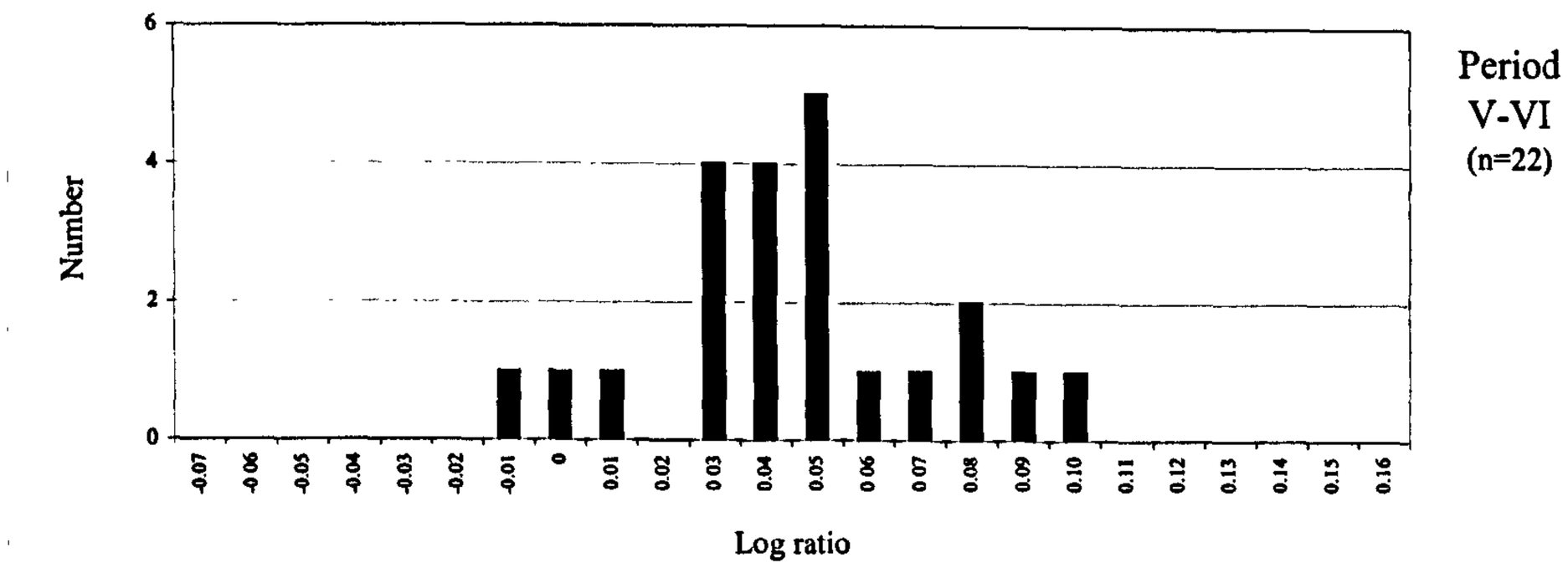


Figure 145 cont. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Elms Farm depths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

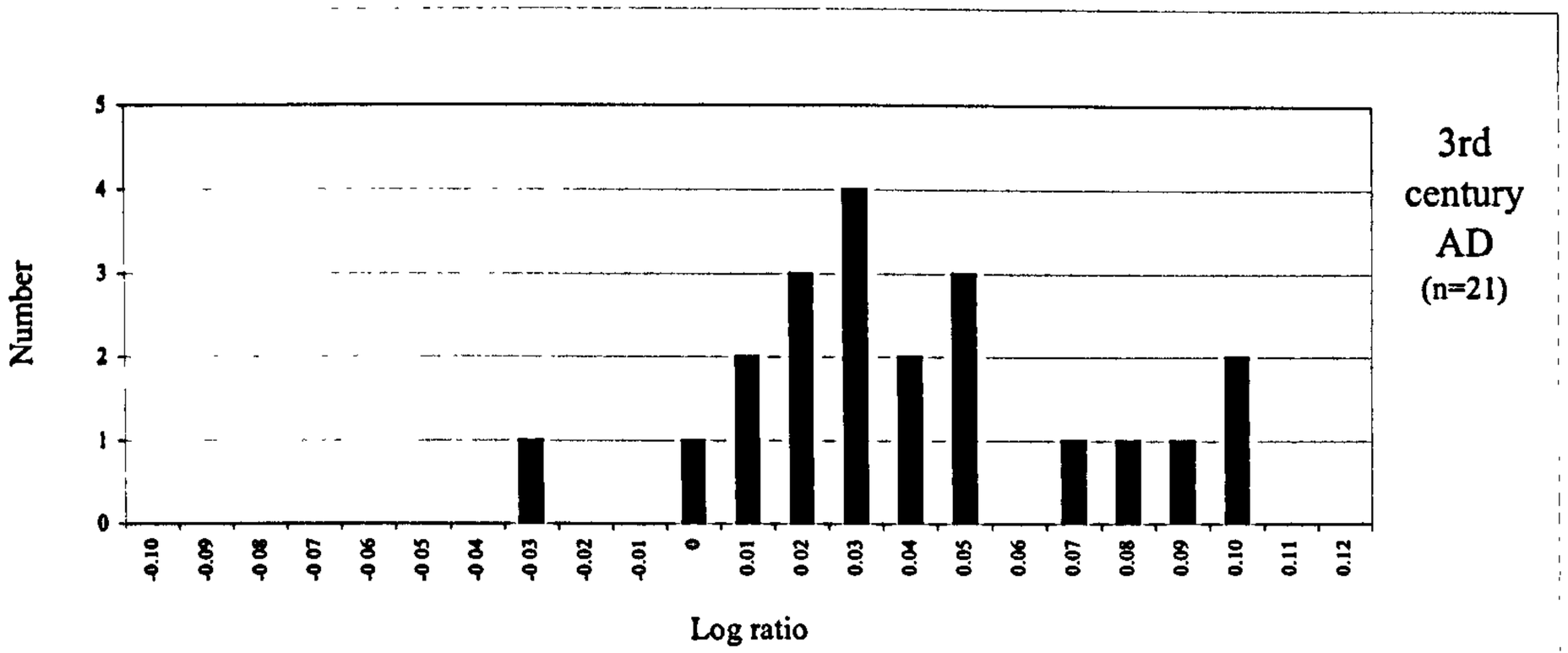


Figure 146. Sheep/goat: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln widths (Dobney *et al*. 1996: 176-191, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

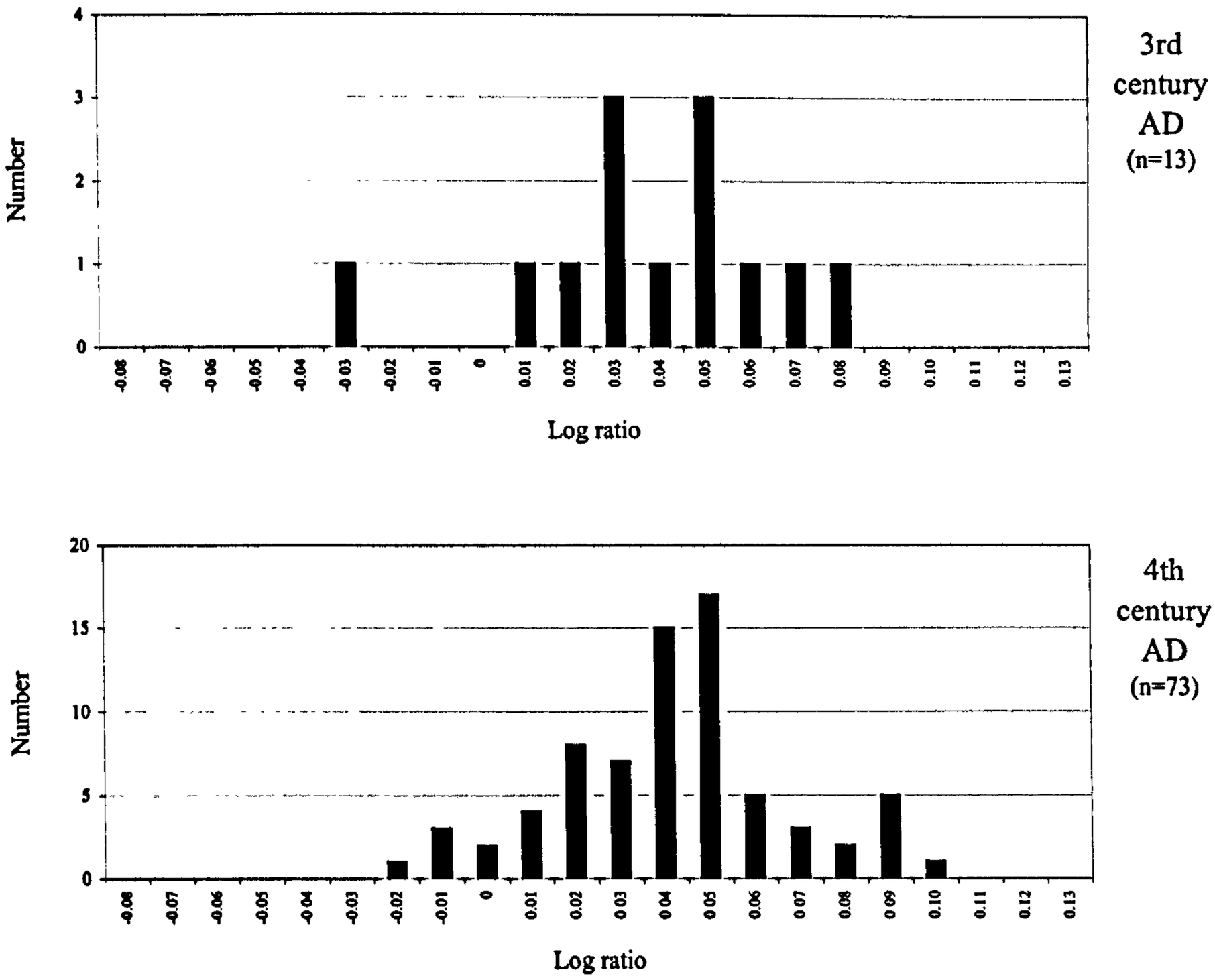


Figure 147. Sheep/goat: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln lengths (Dobney *et al*. 1996: 176-191, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

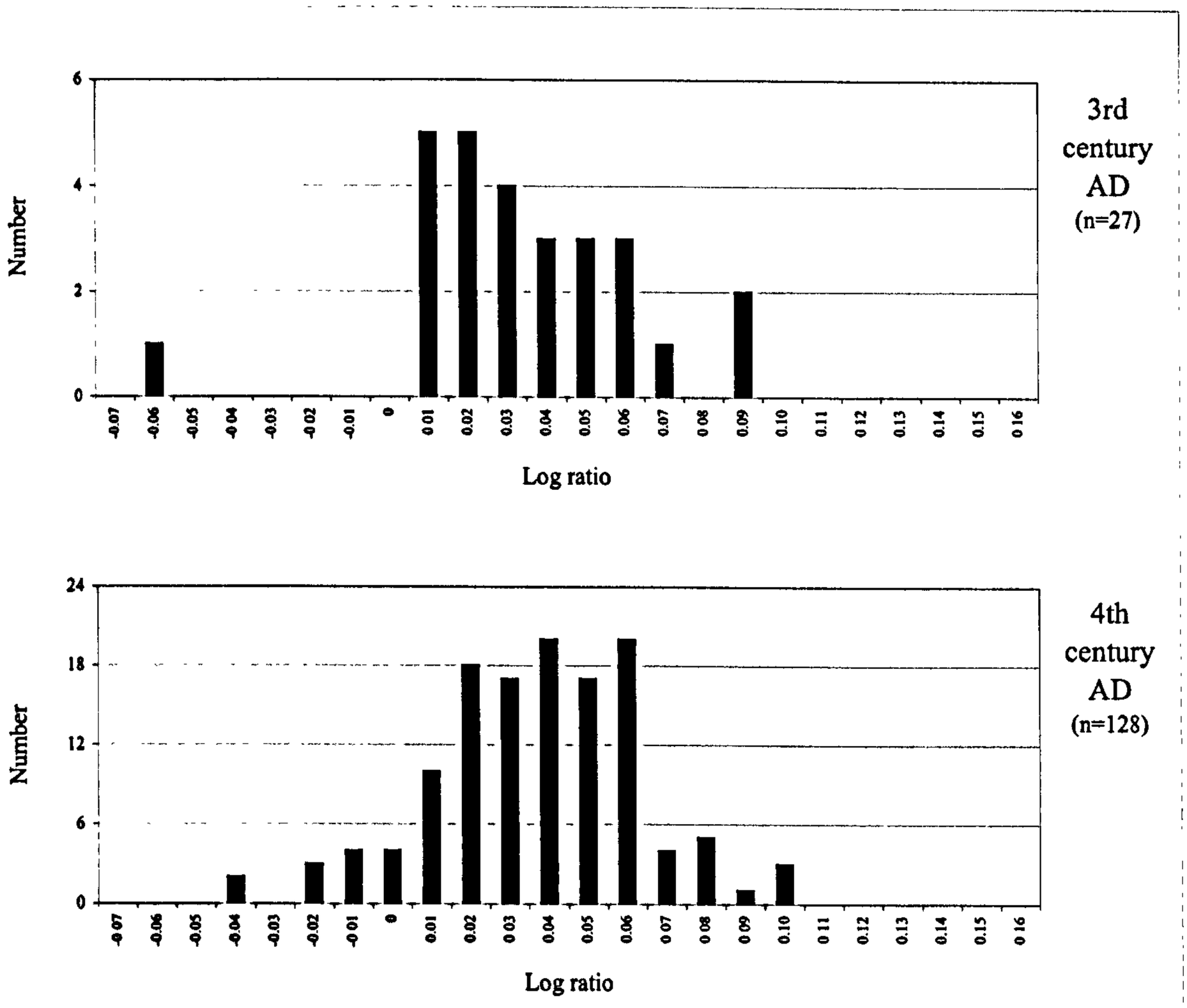


Figure 148. Sheep/goat: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln depths (Dobney *et al*. 1996: 176-191, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

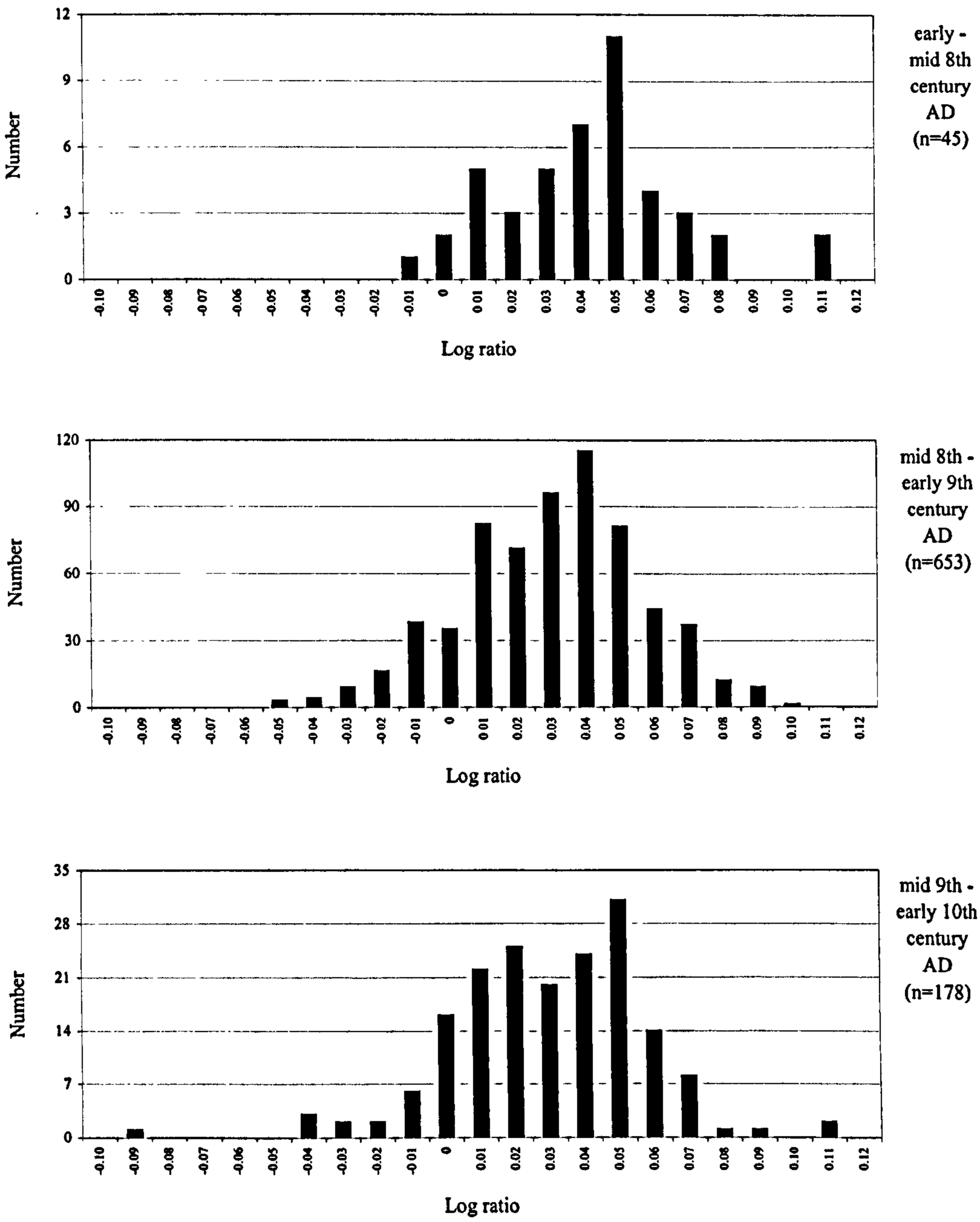


Figure 149. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Six Dials widths by phase (Andrews 1997: 13-14; Bourdillon & Andrews 1997: 242; University of Southampton 2003)

NB. '0' represents the standard value: *Viroconium* Phase W average

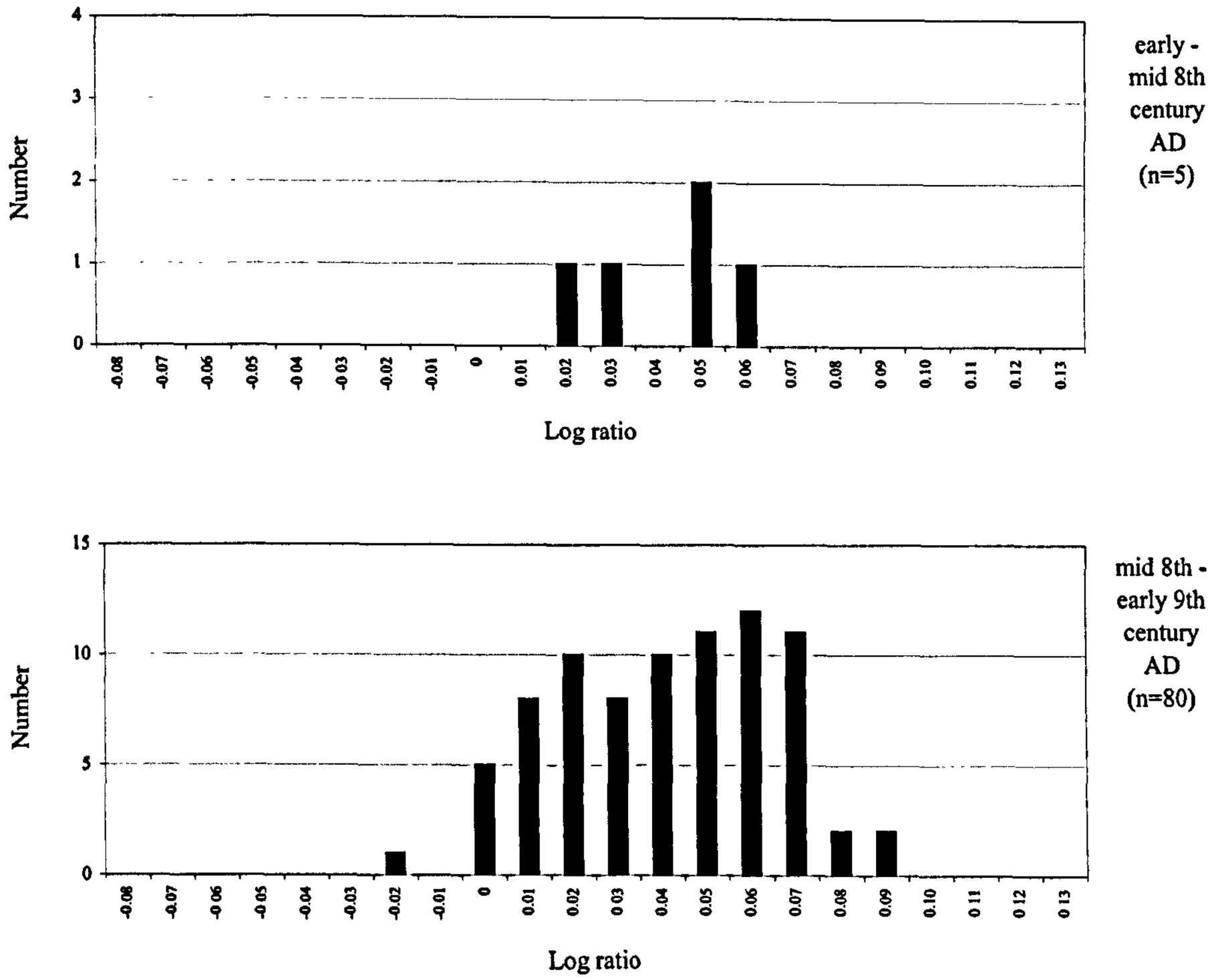


Figure 150. Sheep/goat: Biometry: Log ratios: Inter-site comparison: Six Dials lengths by phase (Andrews 1997: 13-14; Bourdillon & Andrews 1997: 242; University of Southampton 2003)

NB. '0' represents the standard value: *Viroconium* Phase W average

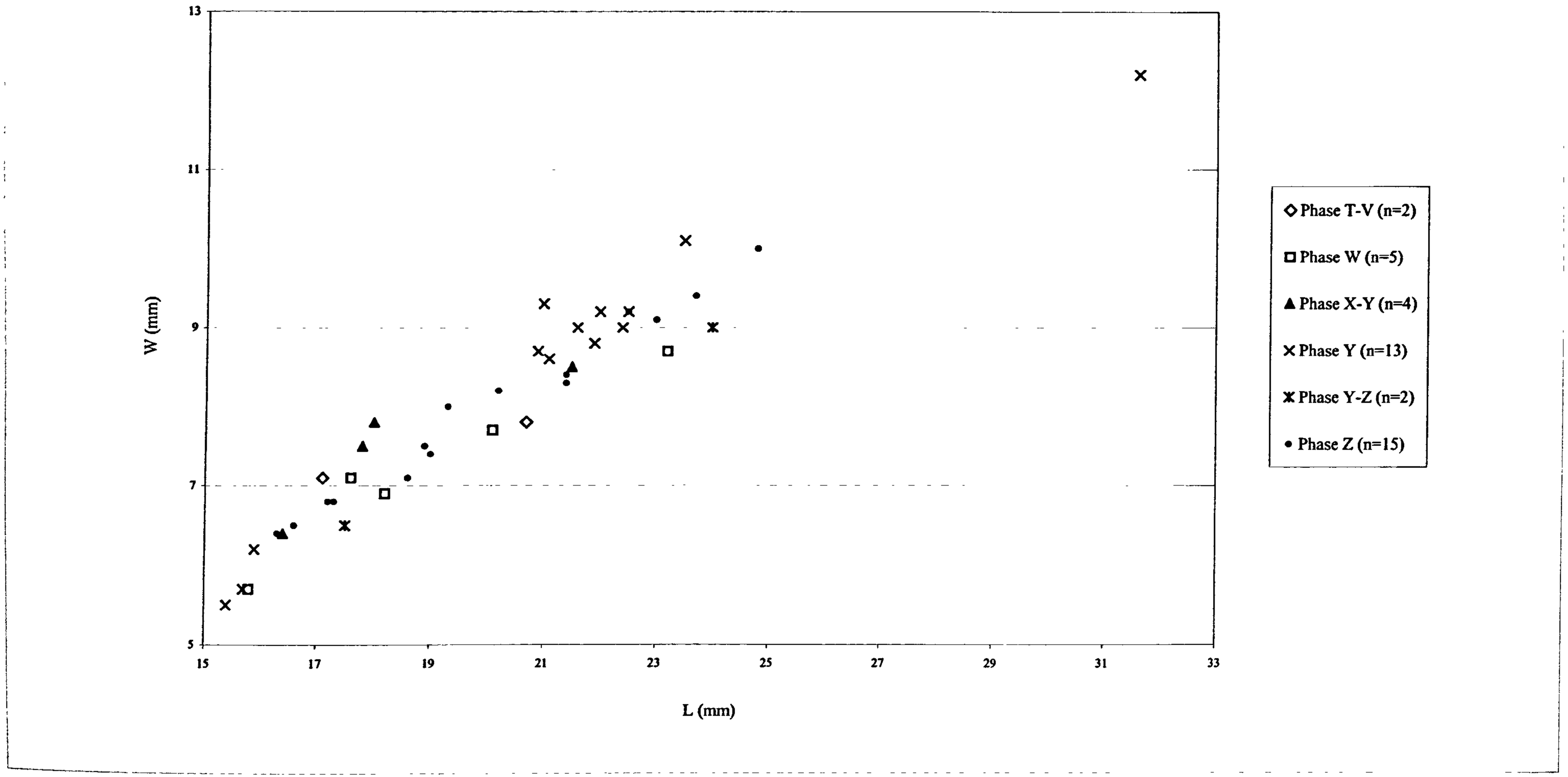


Figure 151. Dog: Biometry: Dog diversity: First molar shape indices (L by W)

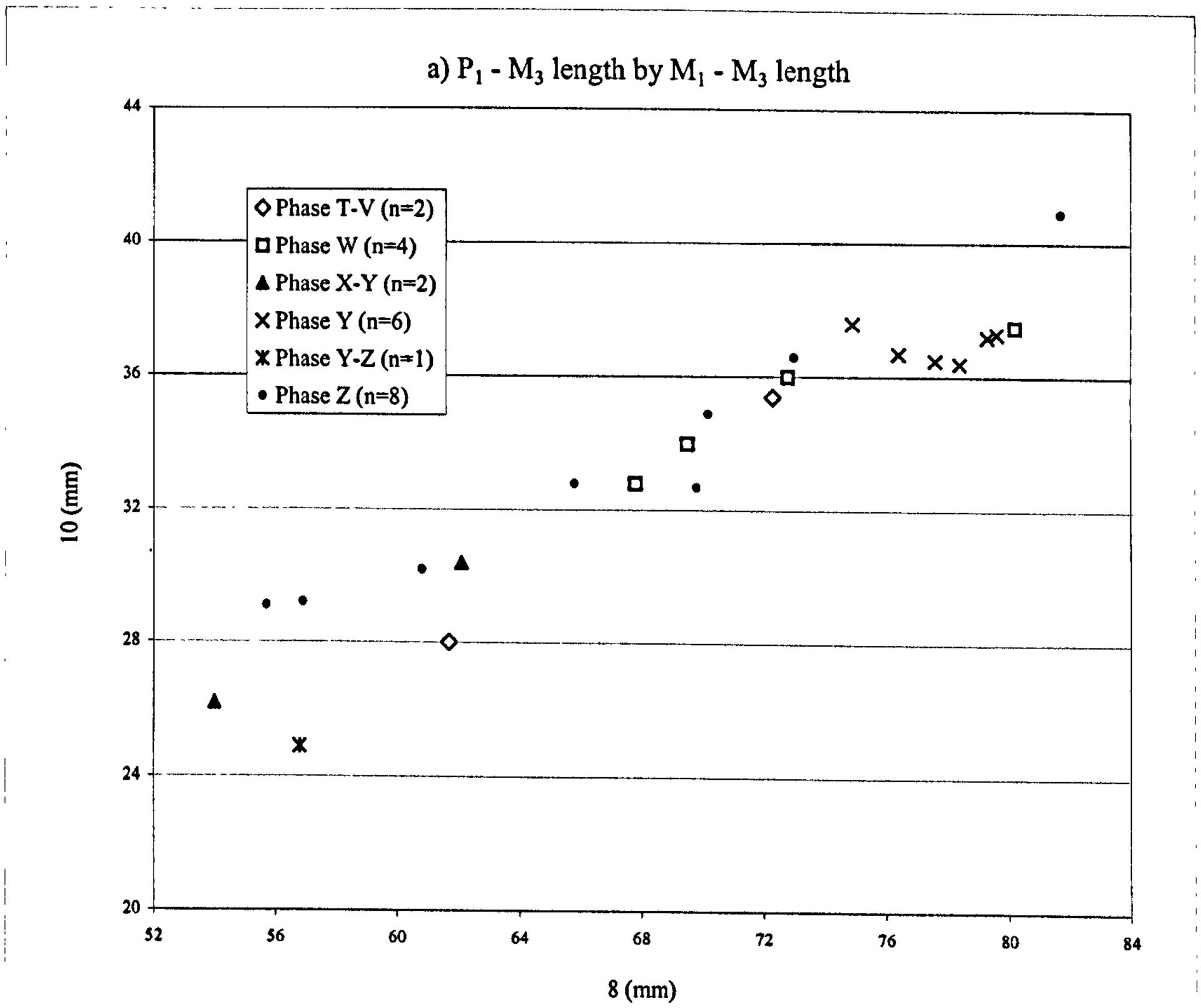


Figure 152. Dog: Biometry: Dog diversity: Mandibular shape indices, based on measurements of the premolar - molar tooth row

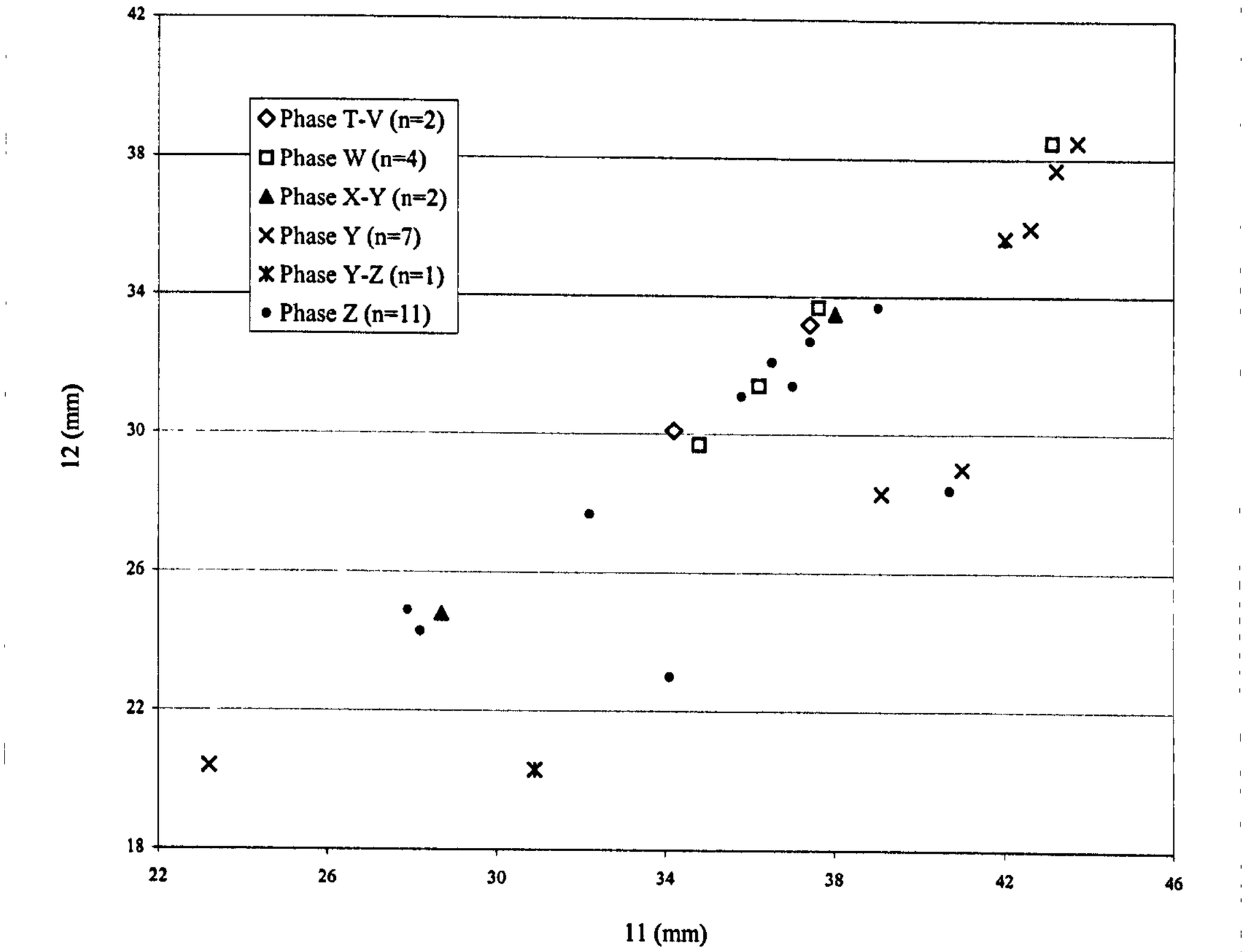


Figure 152 cont. Dog: Biometry: Dog diversity: Mandibular shape indices, based on measurements of the premolar - molar tooth row

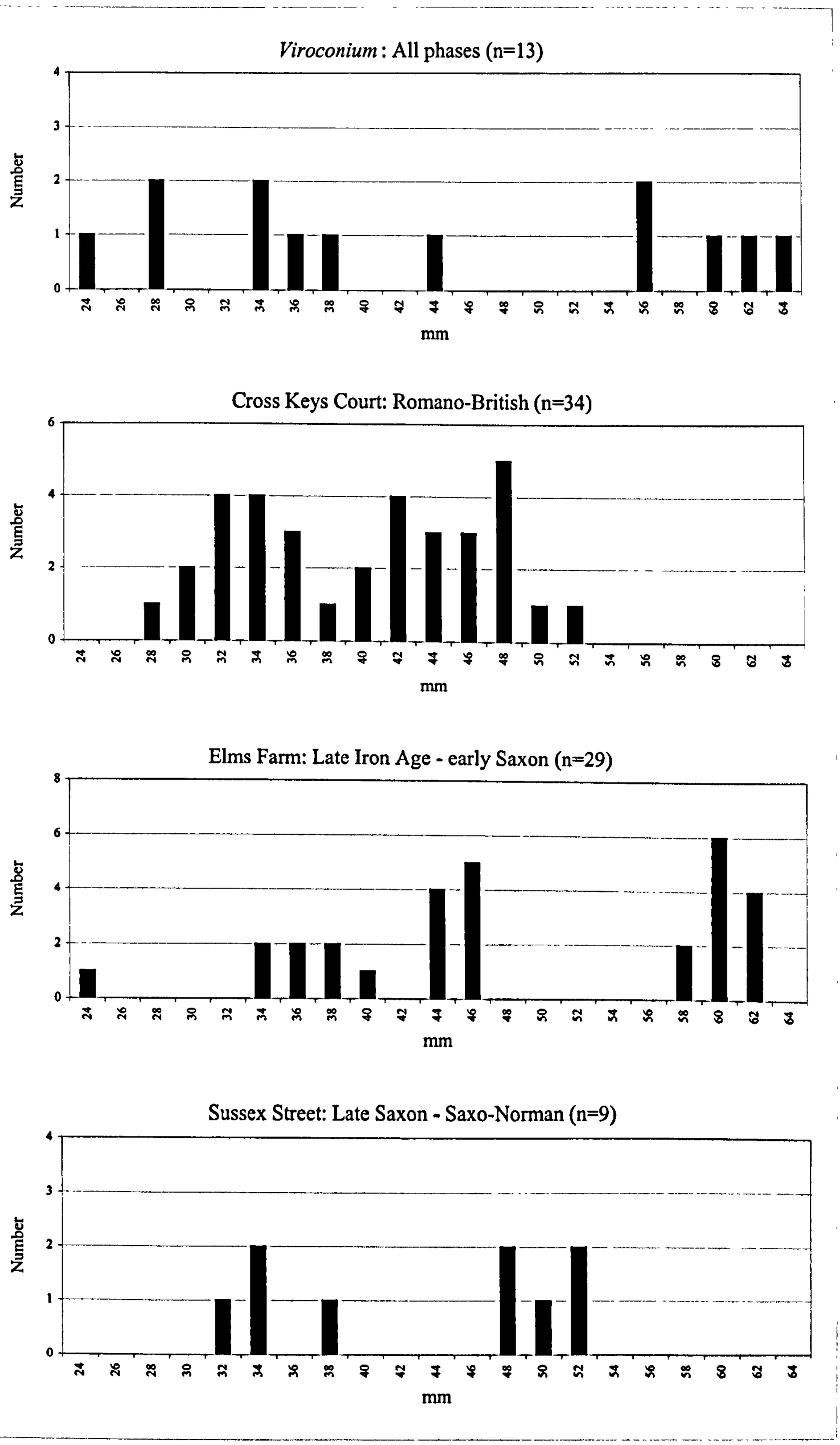


Figure 153. Dog: Biometry: Dog diversity: Inter-site comparison: Estimated shoulder heights, using the multiplication factors of Harcourt (1974: 154)

NB. Refer to text for references; figures rounded to nearest 2 mm

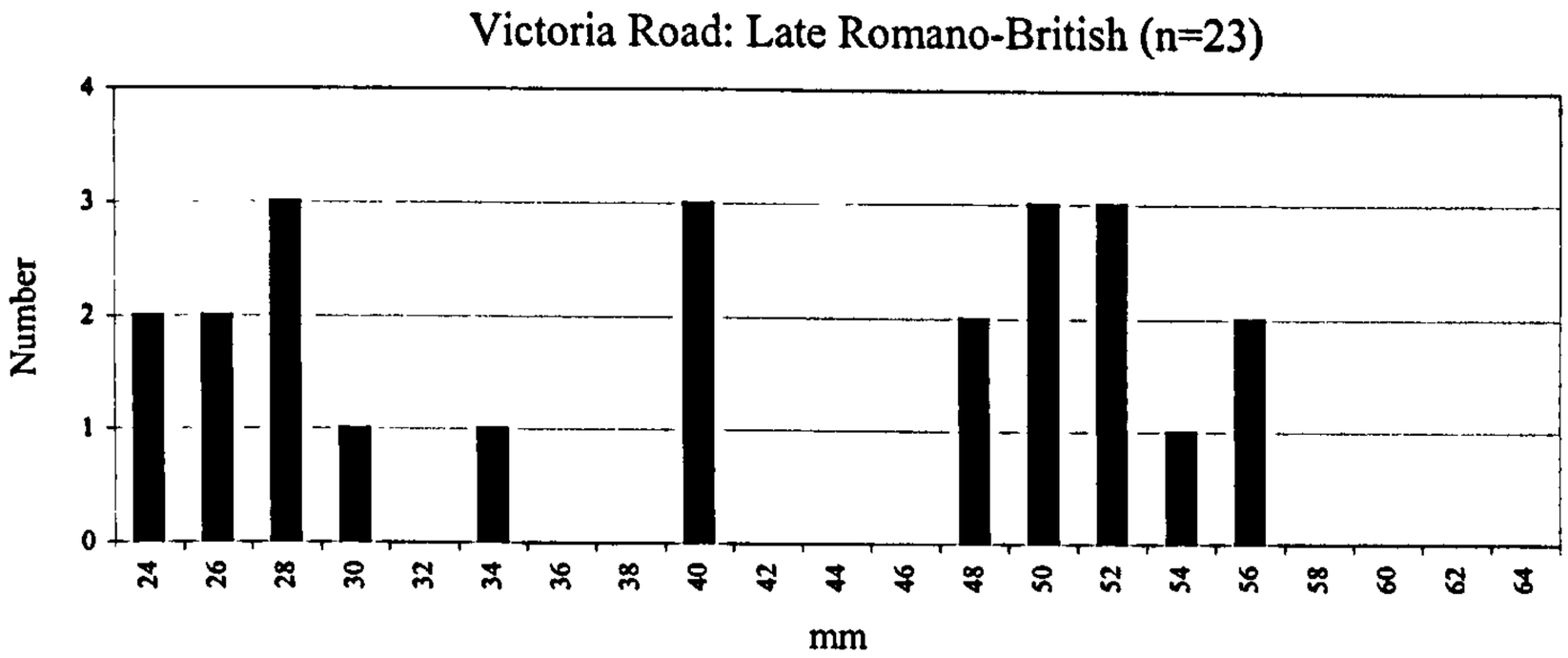
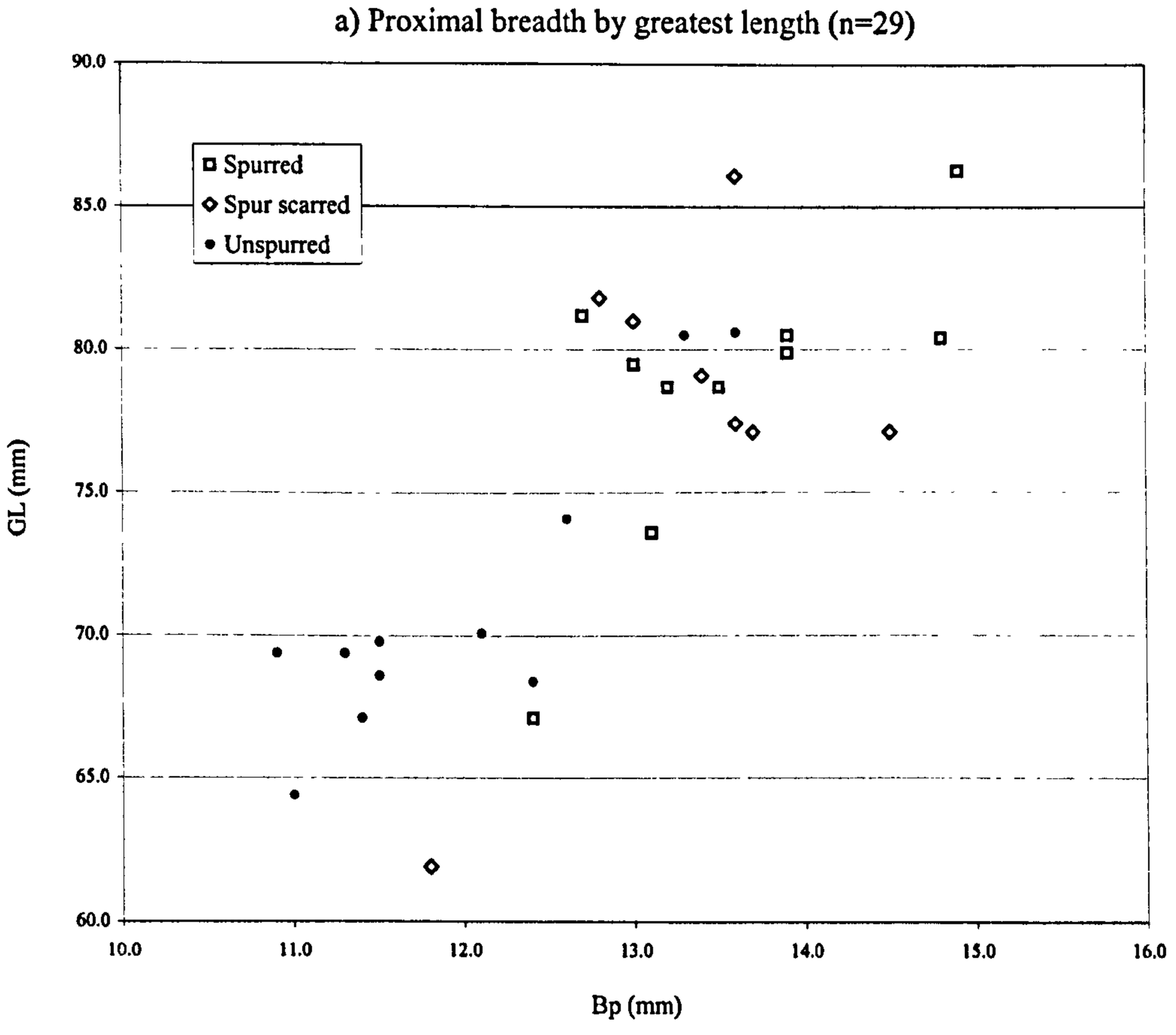


Figure 153 cont. Dog: Biometry: Dog diversity: Inter-site comparison: Estimated shoulder heights, using the multiplication factors of Harcourt (1974: 154)

NB. Refer to text for references; figures rounded to nearest 2 mm



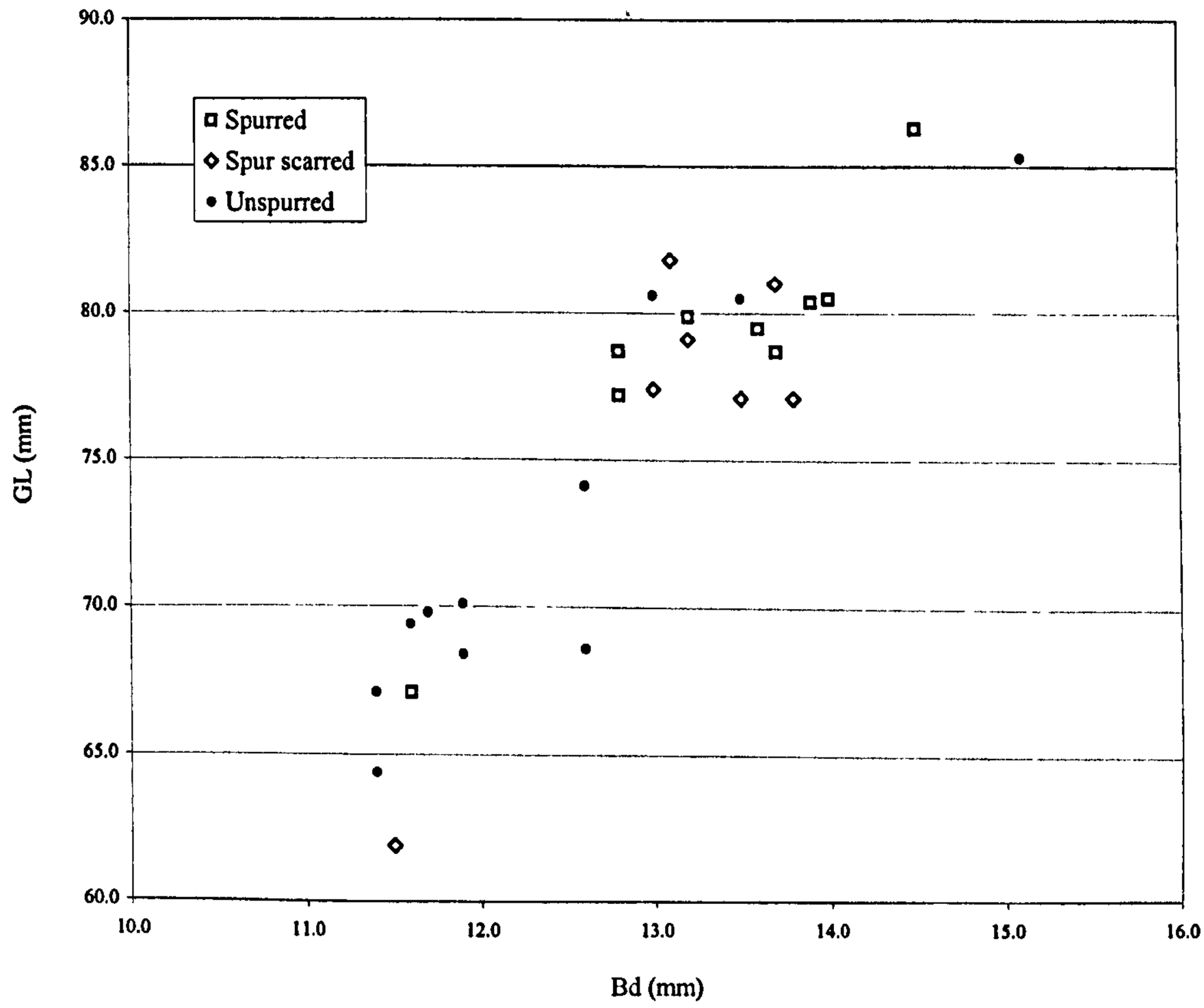


Figure 154. Domestic fowl: Biometry: Tarsometatarsus shape indices, annotated with spurred, spur scarred and unspurred specimens

Figure 155. Domestic fowl: Biometry: Log ratios: Inter-site comparison: *Viroconium* widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

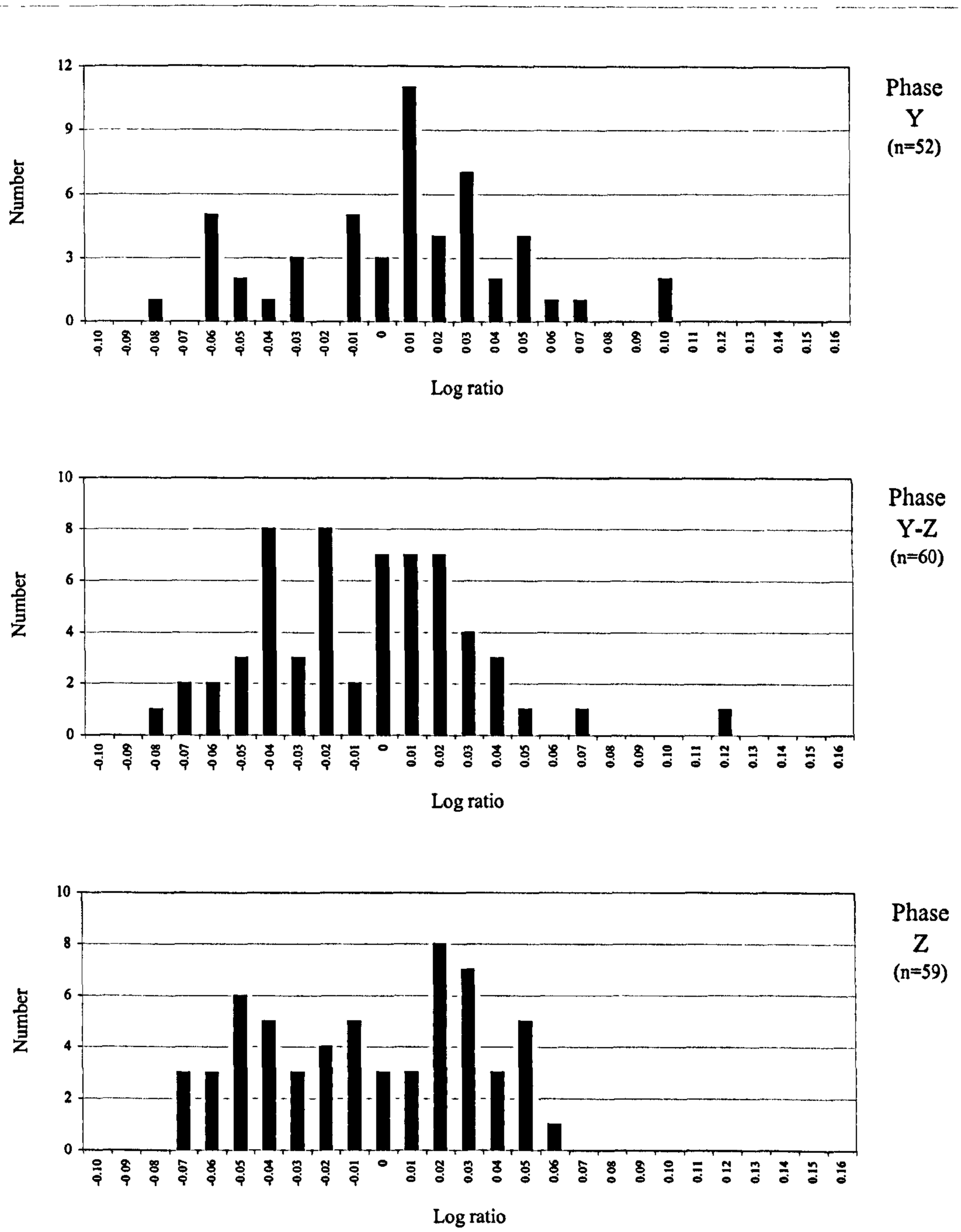


Figure 155 cont. Domestic fowl: Biometry: Log ratios: Inter-site comparison: *Viroconium* widths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

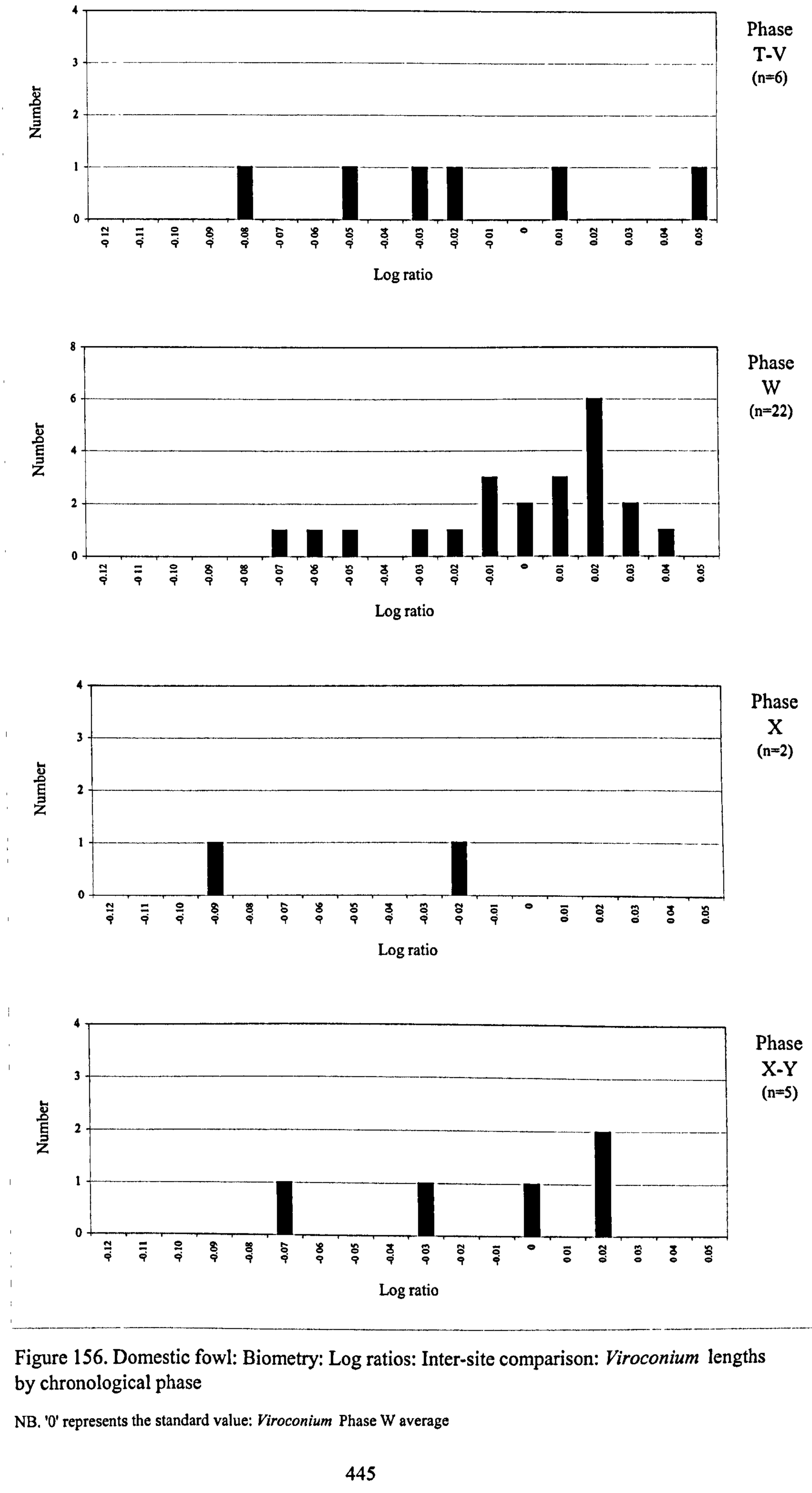


Figure 156. Domestic fowl: Biometry: Log ratios: Inter-site comparison: *Viroconium* lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

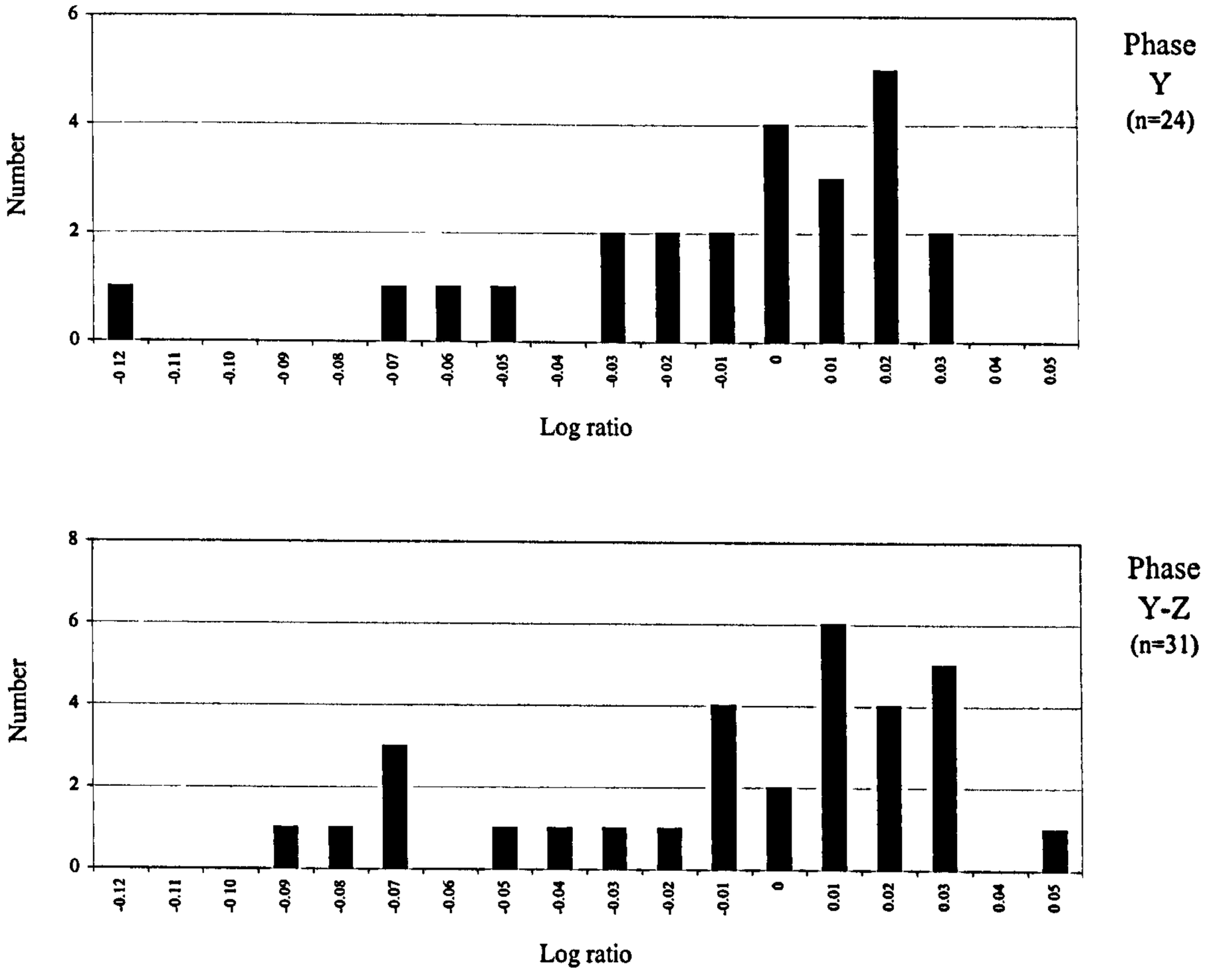


Figure 156 cont. Domestic fowl: Biometry: Log ratios: Inter-site comparison: *Viroconium* lengths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

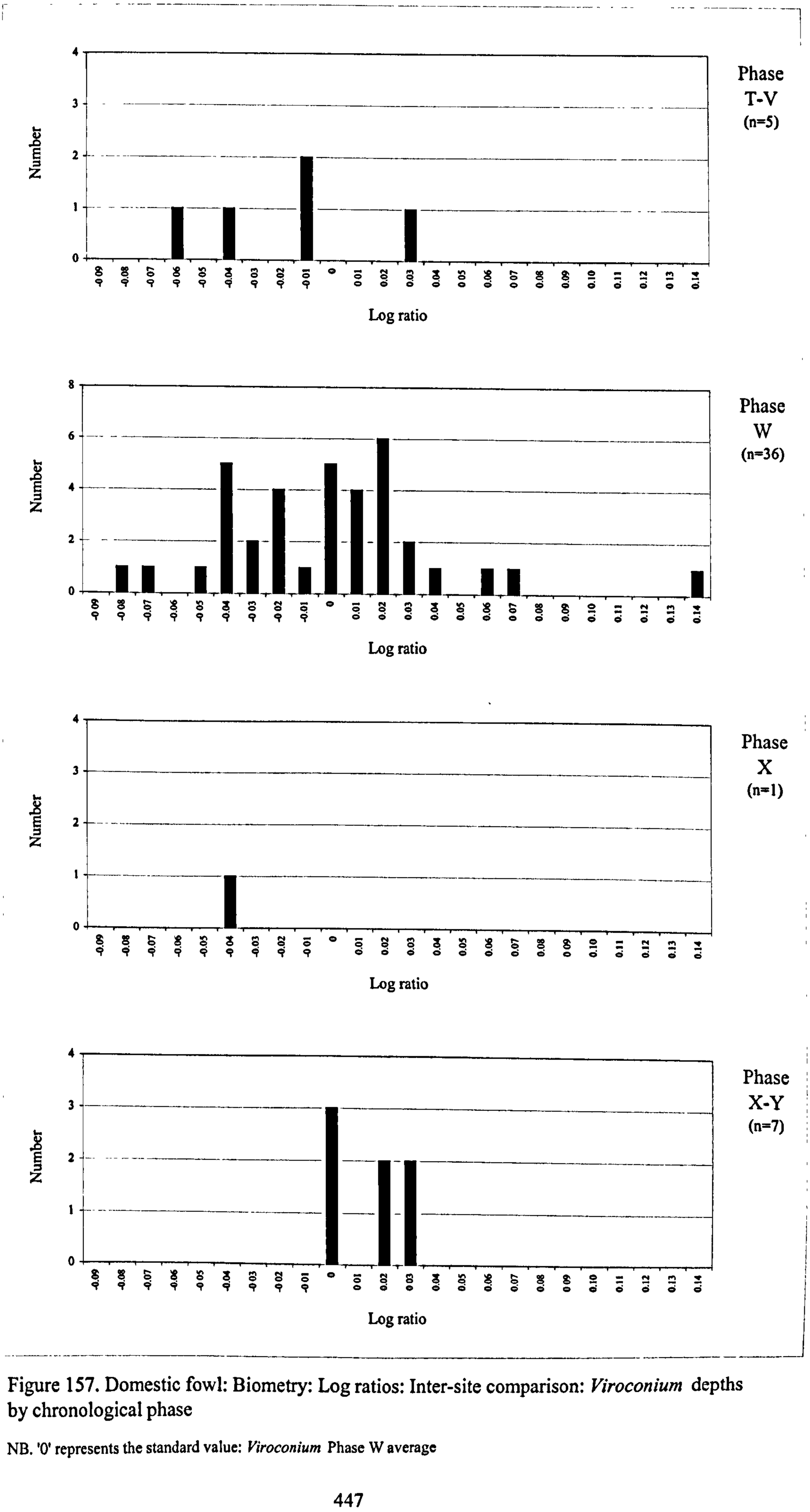


Figure 157. Domestic fowl: Biometry: Log ratios: Inter-site comparison: *Viroconium* depths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

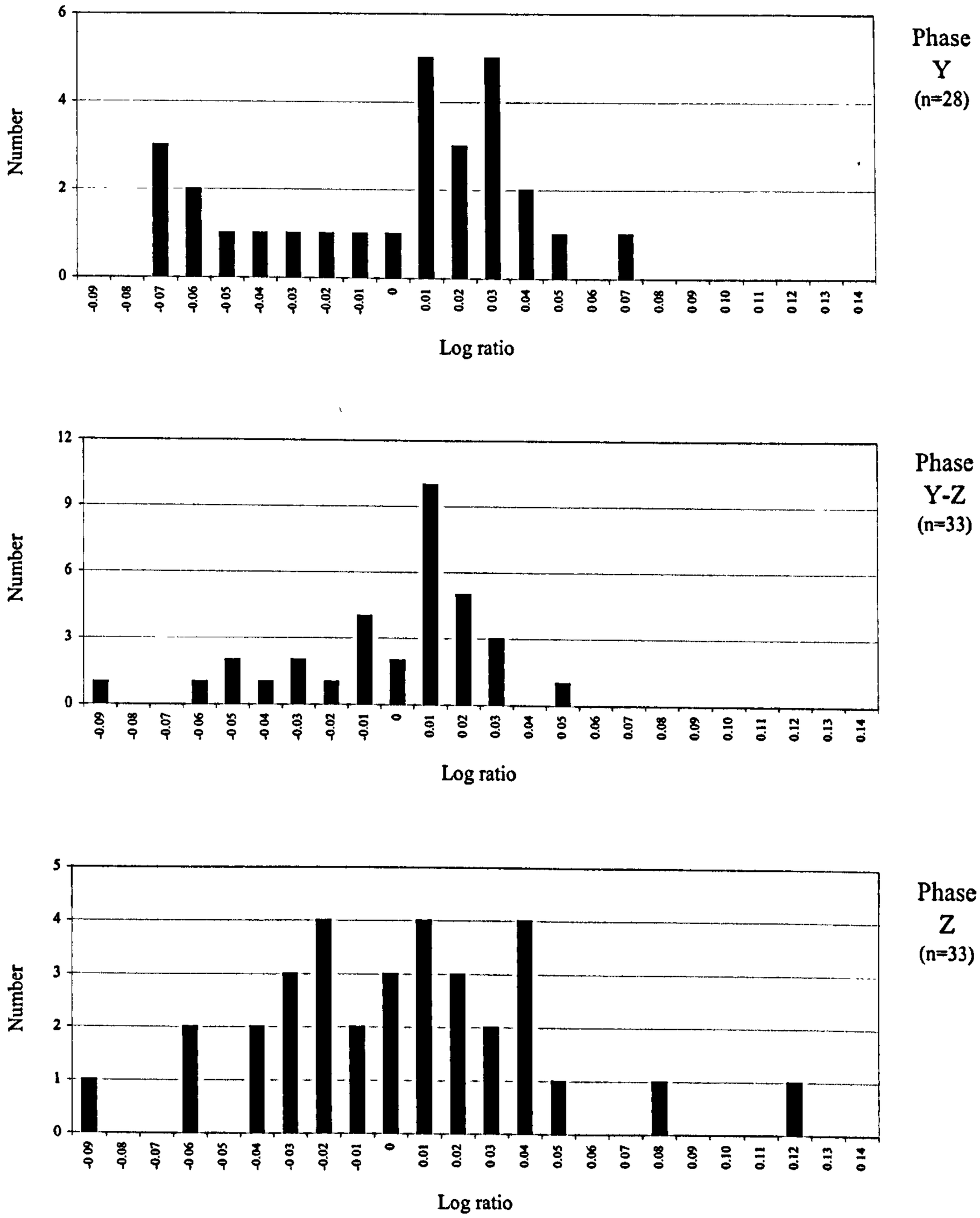


Figure 157 cont. Domestic fowl: Biometry: Log ratios: Inter-site comparison: *Viroconium* depths by chronological phase

NB. '0' represents the standard value: *Viroconium* Phase W average

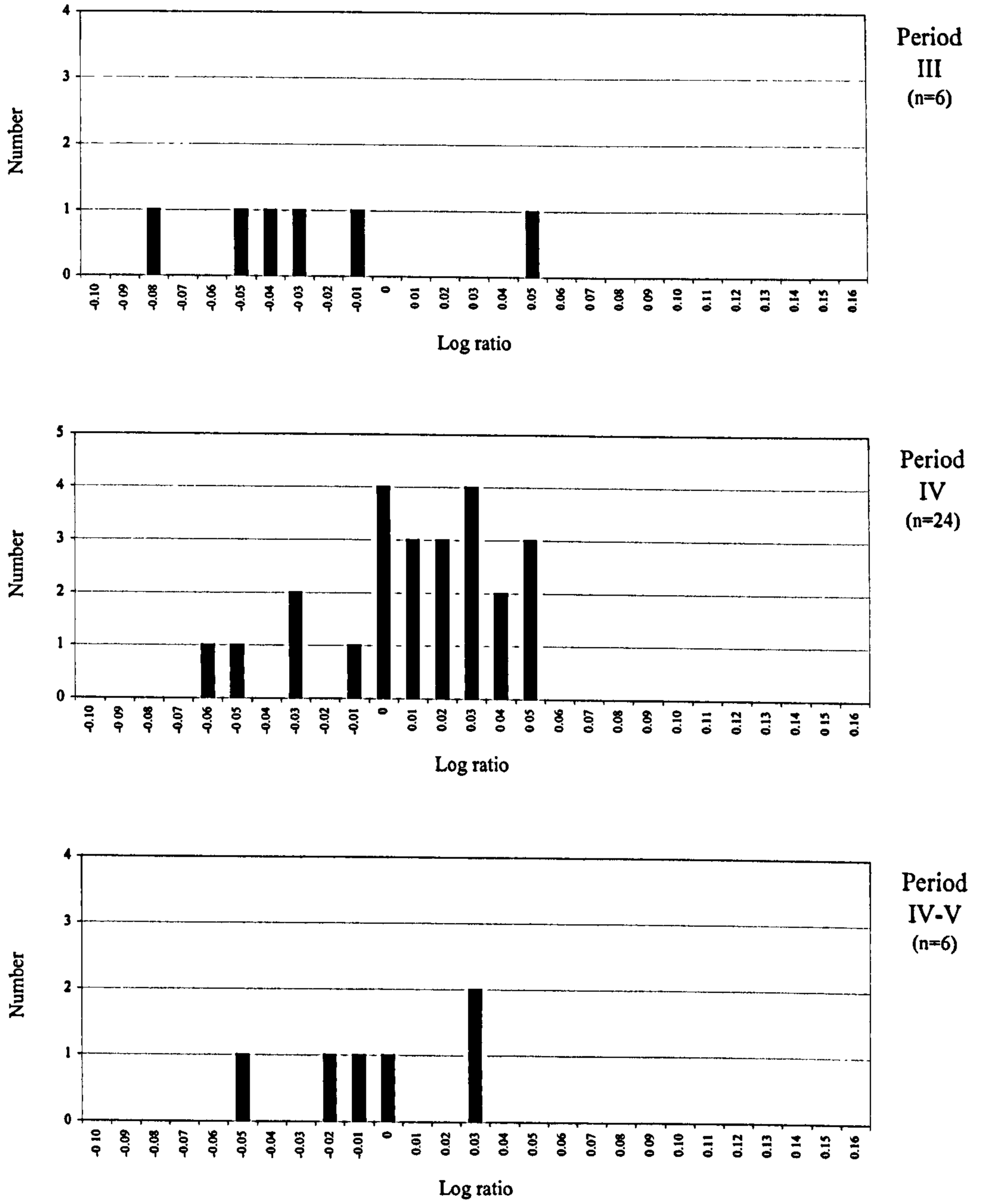


Figure 158. Domestic fowl: Biometry: Log ratios: Inter-site comparison: Elms Farm widths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

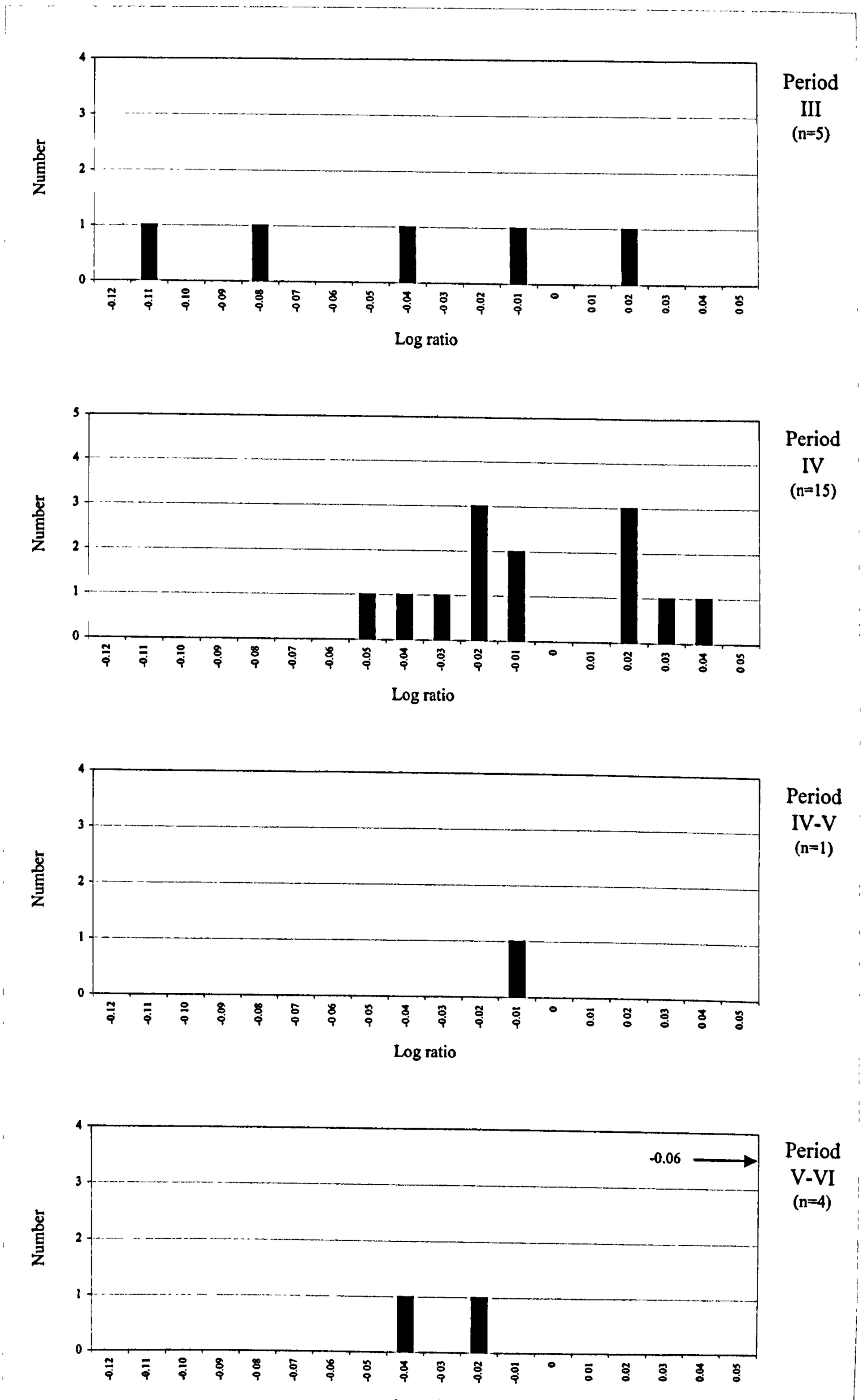


Figure 159. Domestic fowl: Biometry: Log ratios: Inter-site comparison: Elms Farm lengths by chronological period (Johnstone & Albarella 2002: 173-186, Appendix)

NB. '0' represents the standard value: *Viroconium* Phase W average

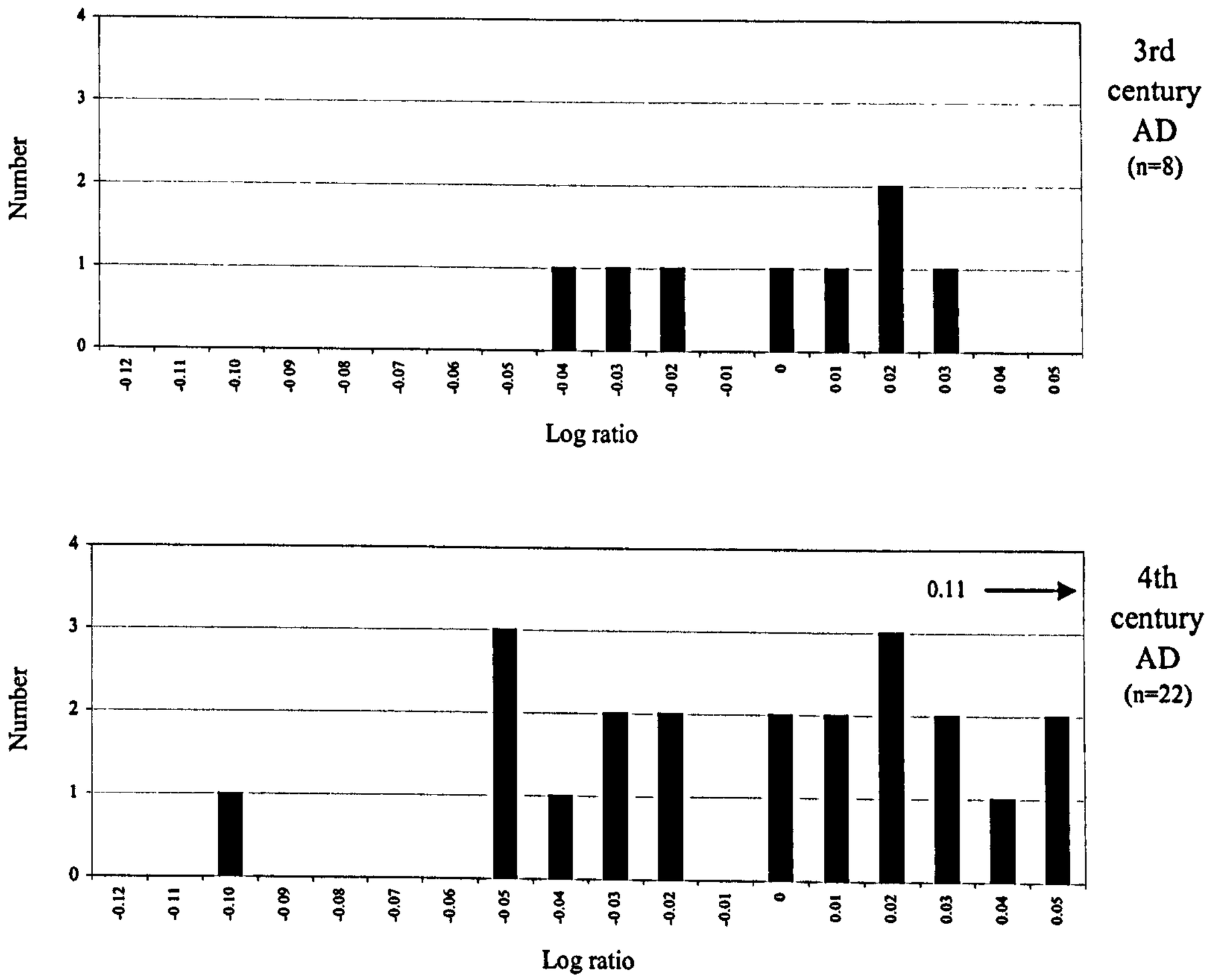


Figure 160. Domestic fowl: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln widths (Dobney *et al*. 1996: 196-198, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

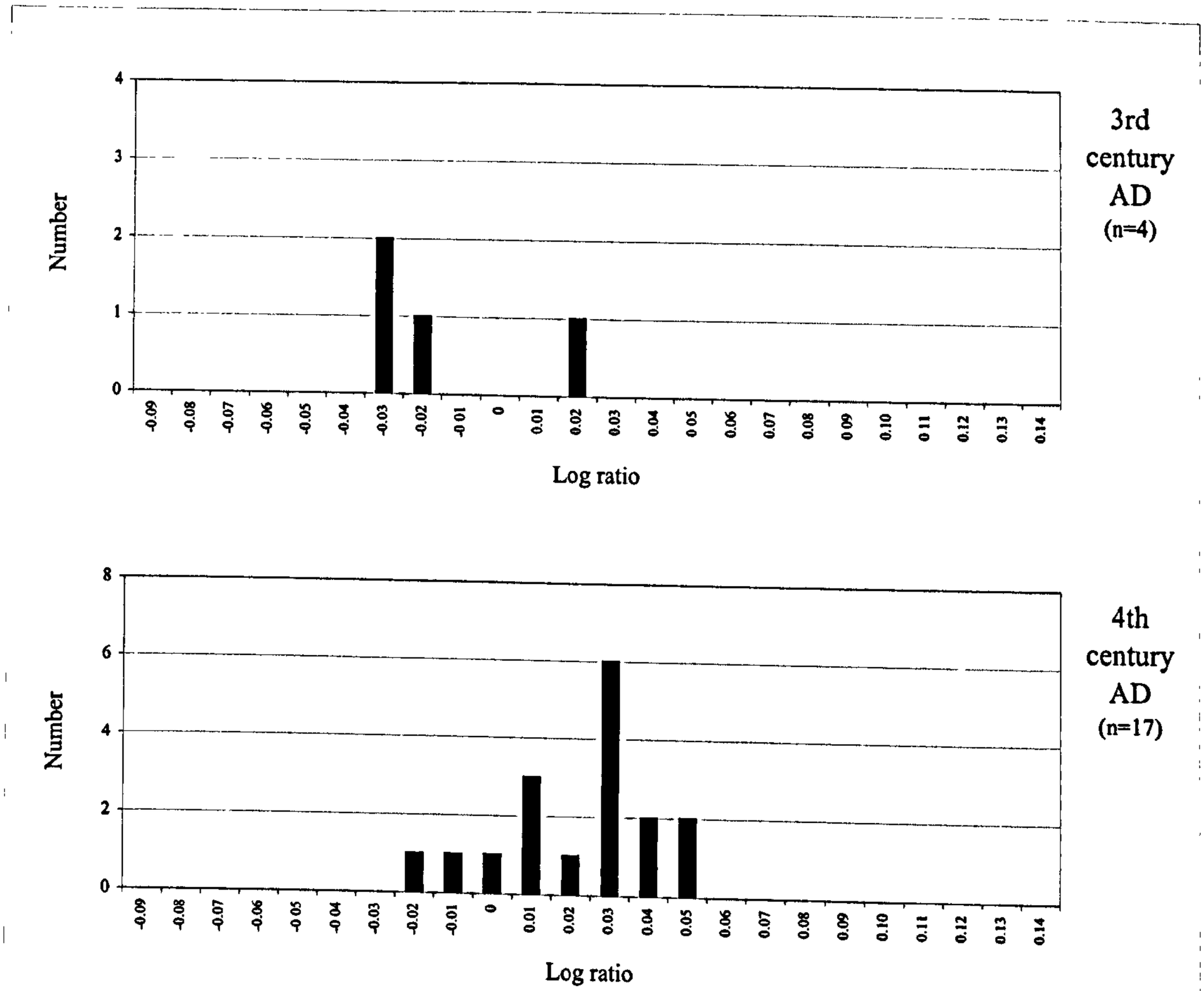


Figure 161. Domestic fowl: Biometry: Log ratios: Inter-site comparison: 3rd and 4th century Lincoln depths (Dobney *et al*. 1996: 196-198, Appendix 1)

NB. '0' represents the standard value: *Viroconium* Phase W average

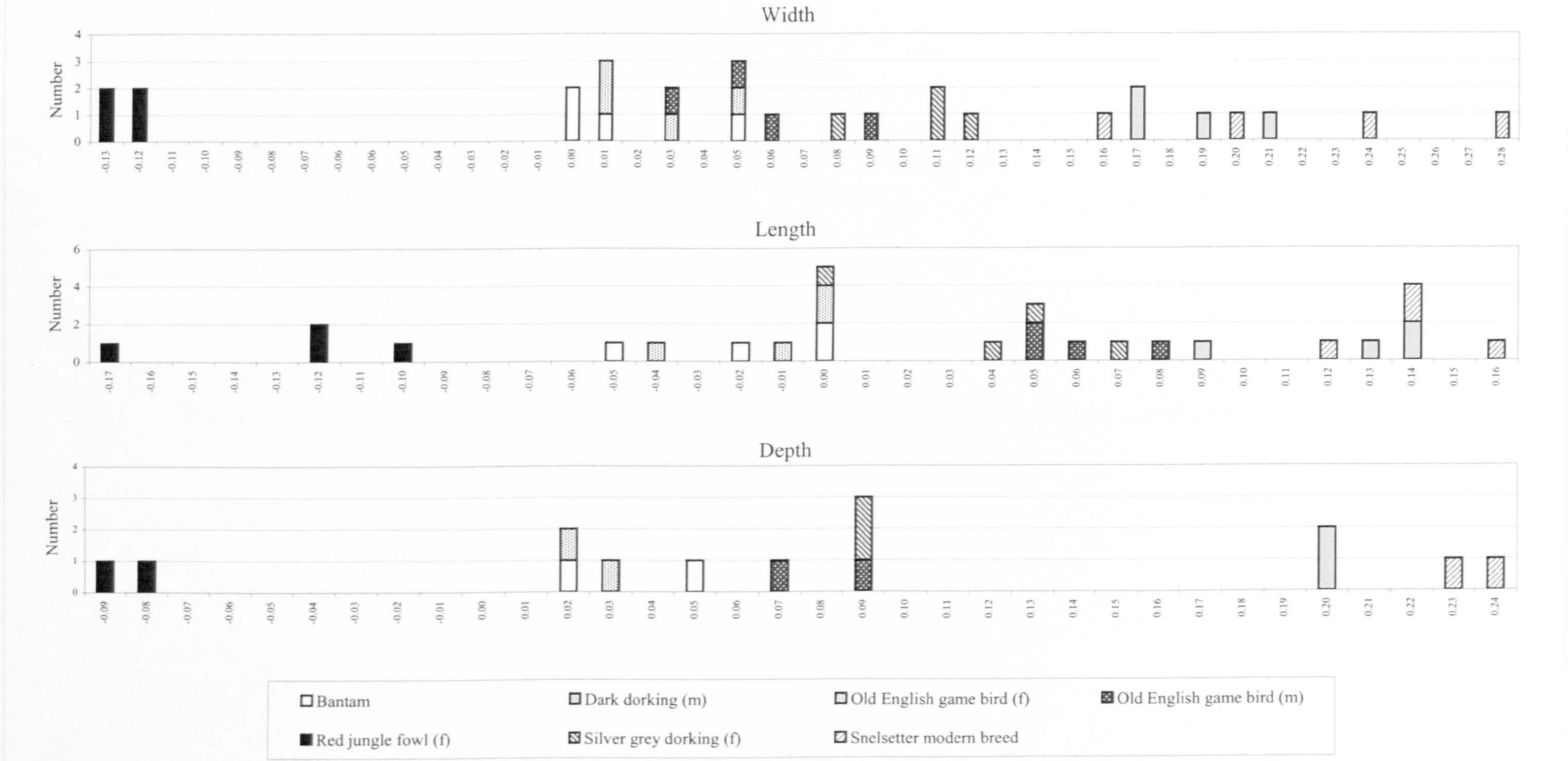


Figure 162. Domestic fowl: Biometry: Log ratios: Width, length and depth comparisons with modern breeds