A Study of European Cereal Frequency Change During The Iron Age And Roman Periods

Tim Mills

Volume Two
Figures, Tables, Appendix and Bibliography

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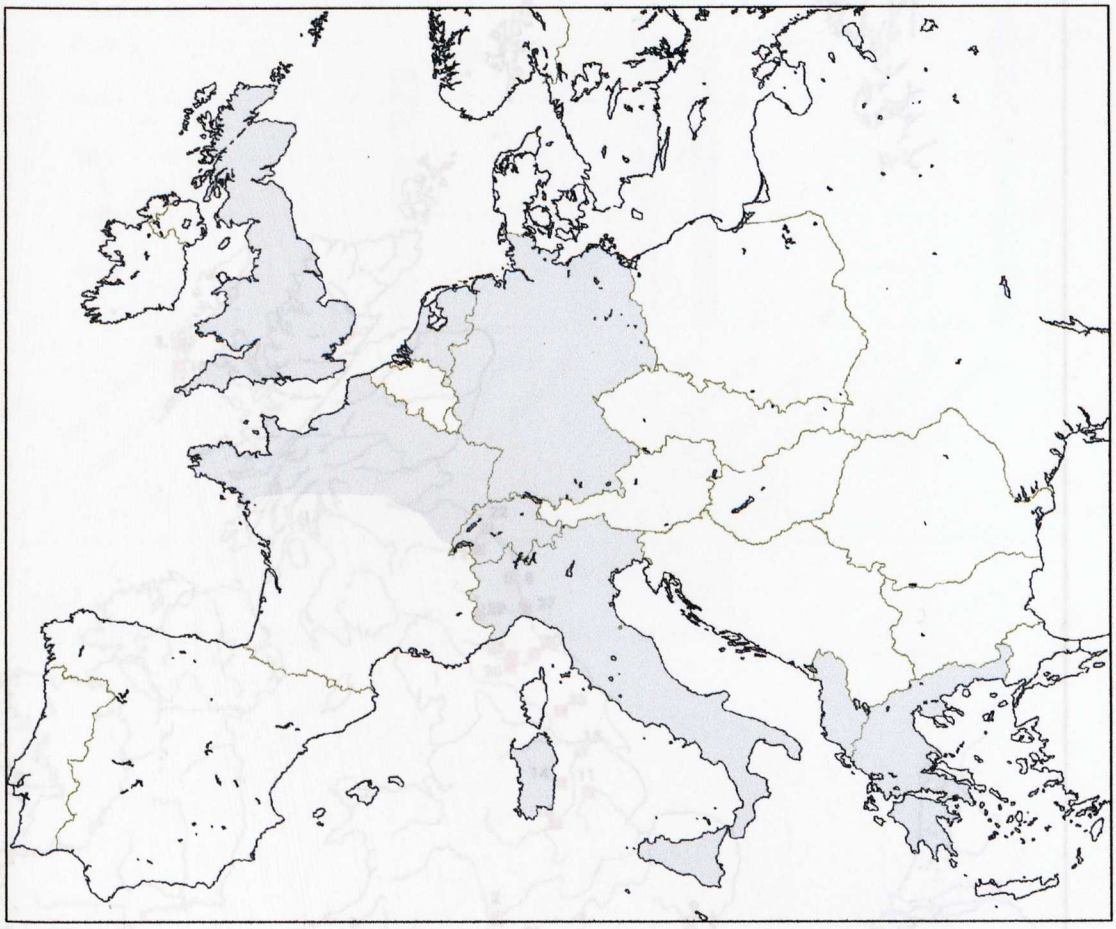


Fig. 1.1
Map of Europe with the study area shaded

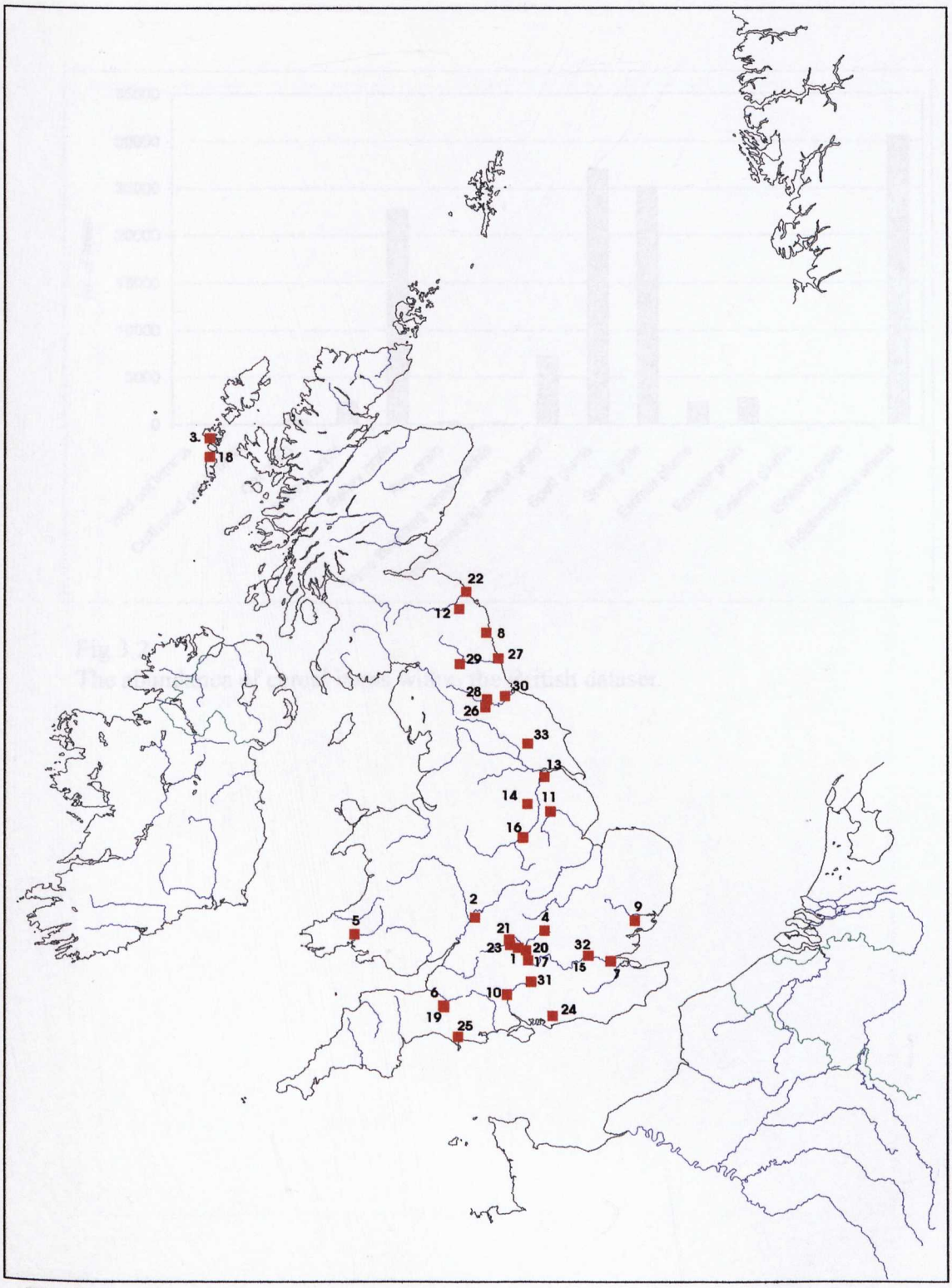


Fig. 3.1
Map of sites included in the British dataset.
1.Abingdon, 2.Aston Mill Farm, 3.Baleshare, 4.Bierton, 5.Carmarthen, 6.Catsgore, 7.Chalk (Gravesend), 8.Chester House, 9.Colchester, 10.Danebury, 11.Deansway, 12.Dod Law West, 13.Dragonby, 14.Dunstons Clump, 15.Forum Grain, 16.Gamston, 17.Half Penny Ln (Didcot), 18.Hornish Point, 19.Ilchester, 20.Maiden Castle, 21.Mingies Ditch, 22.Murton, 23 Old Shifford Farm, 24.Ounces Barn, 25.Poundbury, 26.Rock Castle, 27.South Shields, 28.Stanwick, 29.Thornbrough, 30.Thorpe Thewles, 31.Viables Farm, 32.Waterfront, 33.York Coney Street

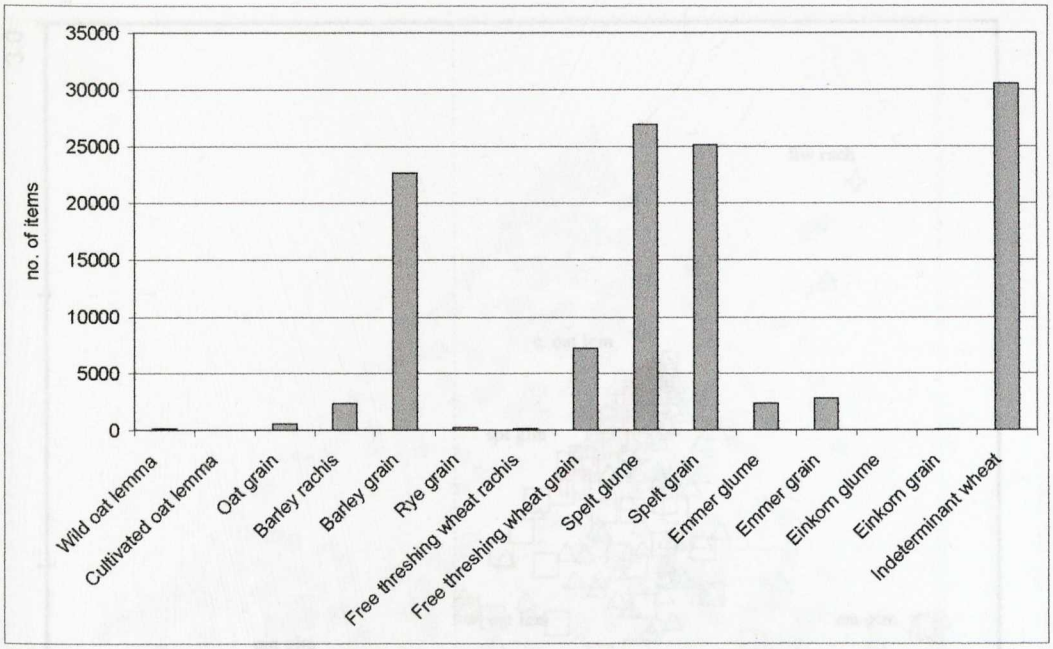


Fig.3.2
The abundance of cereal items within the British dataset.

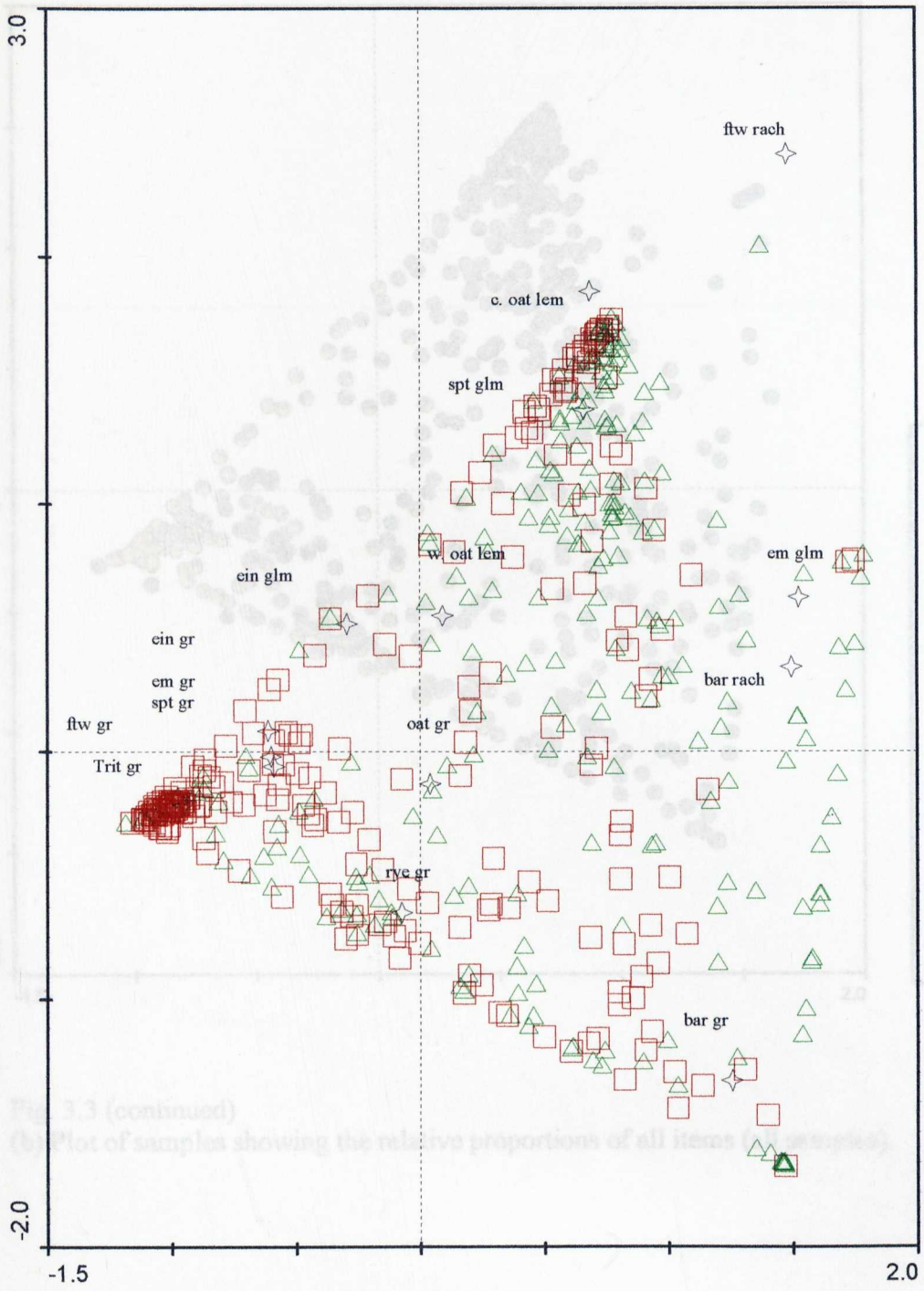


Fig. 3.3
Correspondence analysis plot of all taxa/plant parts in the British samples (coded by period).
(a) Plot of taxa/plant parts and samples. Red squares=Roman; green triangles =Iron Age; stars=items. Mixed period samples left blank.

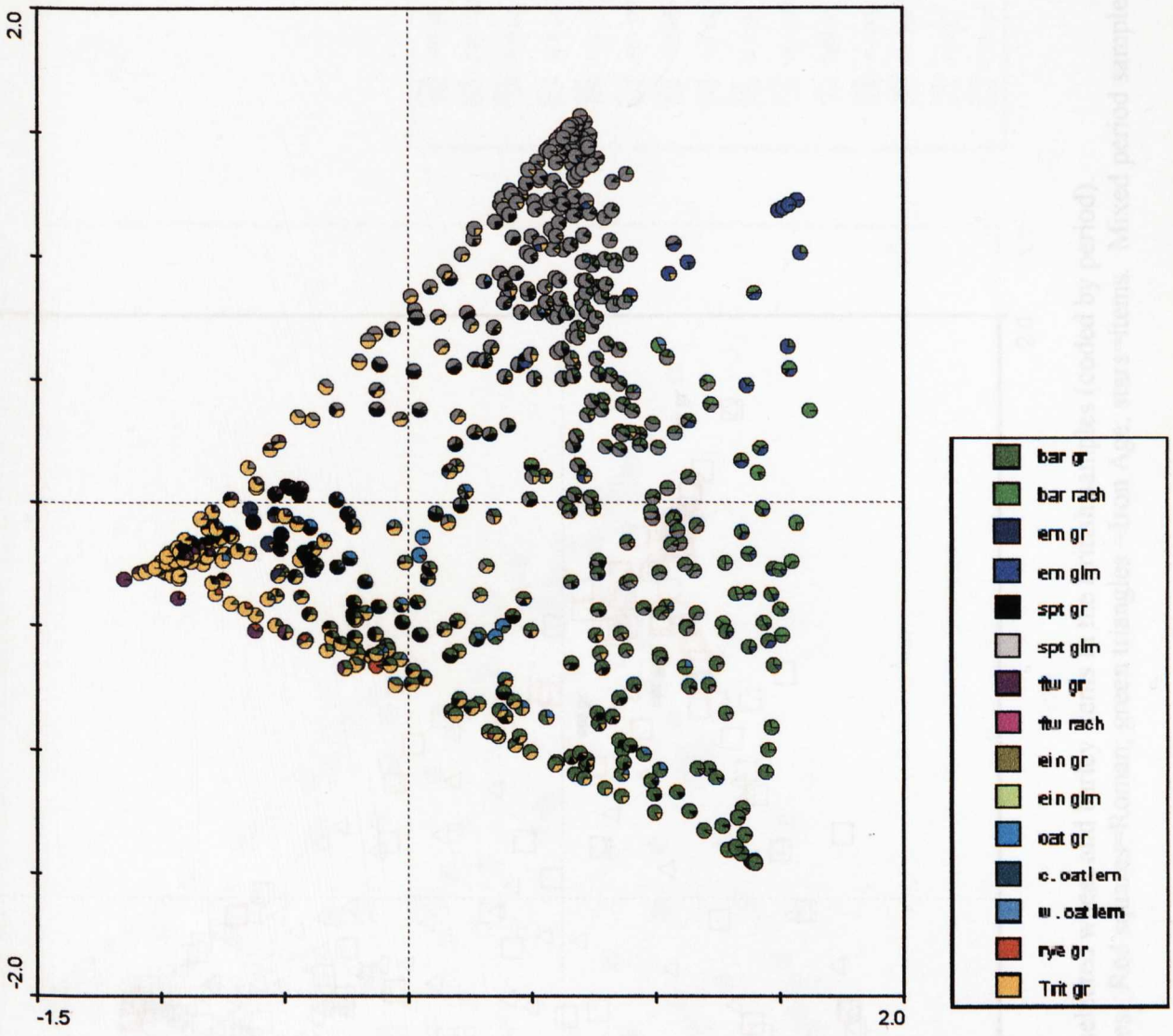


Fig. 3.3 (continued)
(b) Plot of samples showing the relative proportions of all items (all samples).

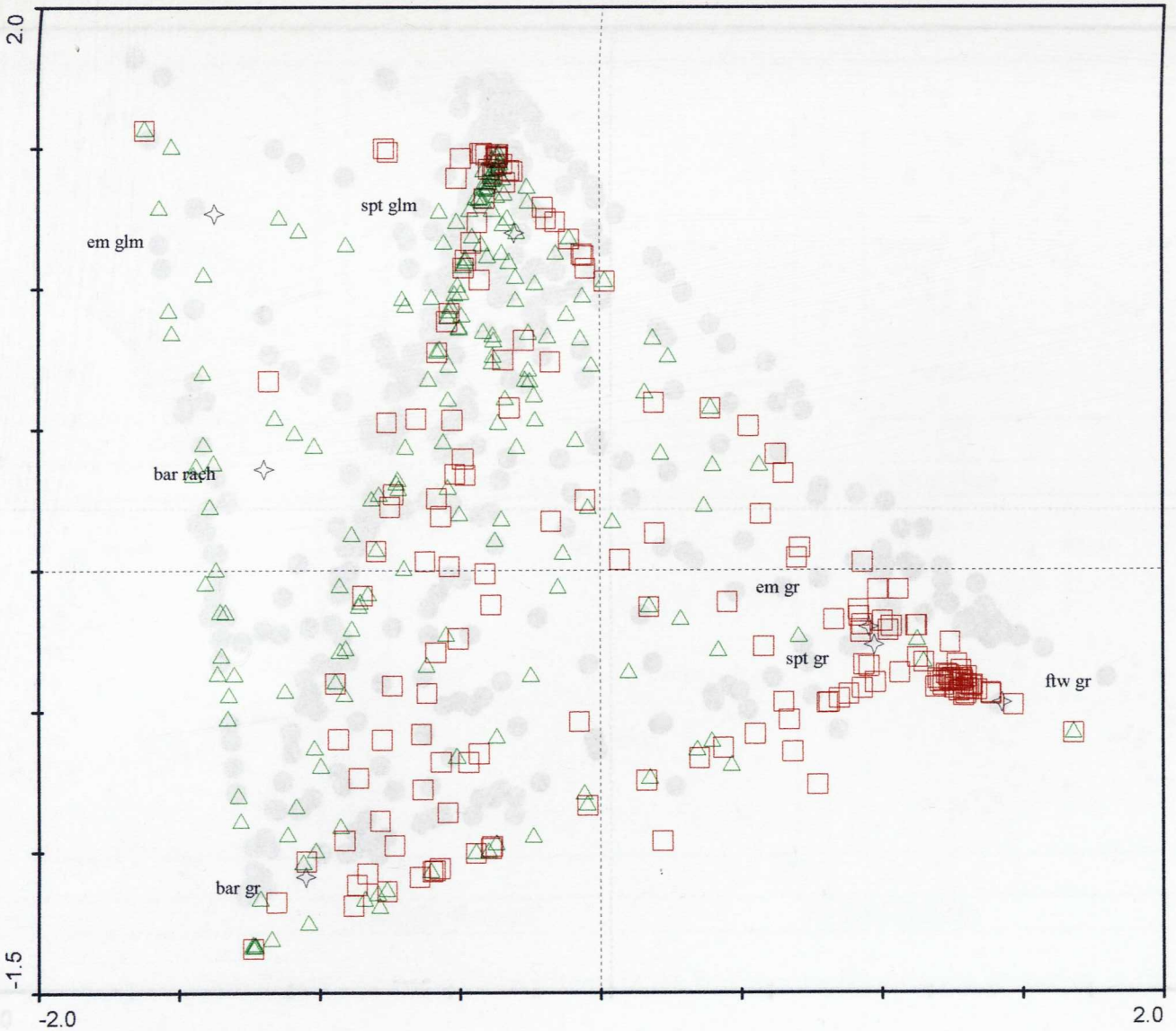


Fig. 3.4

Correspondence analysis plot of the selected wheat and barley items in the British samples (coded by period).

(a) Plot of taxa/plant parts and samples. Red squares=Roman; green triangles =Iron Age; stars=items. Mixed period samples left blank.

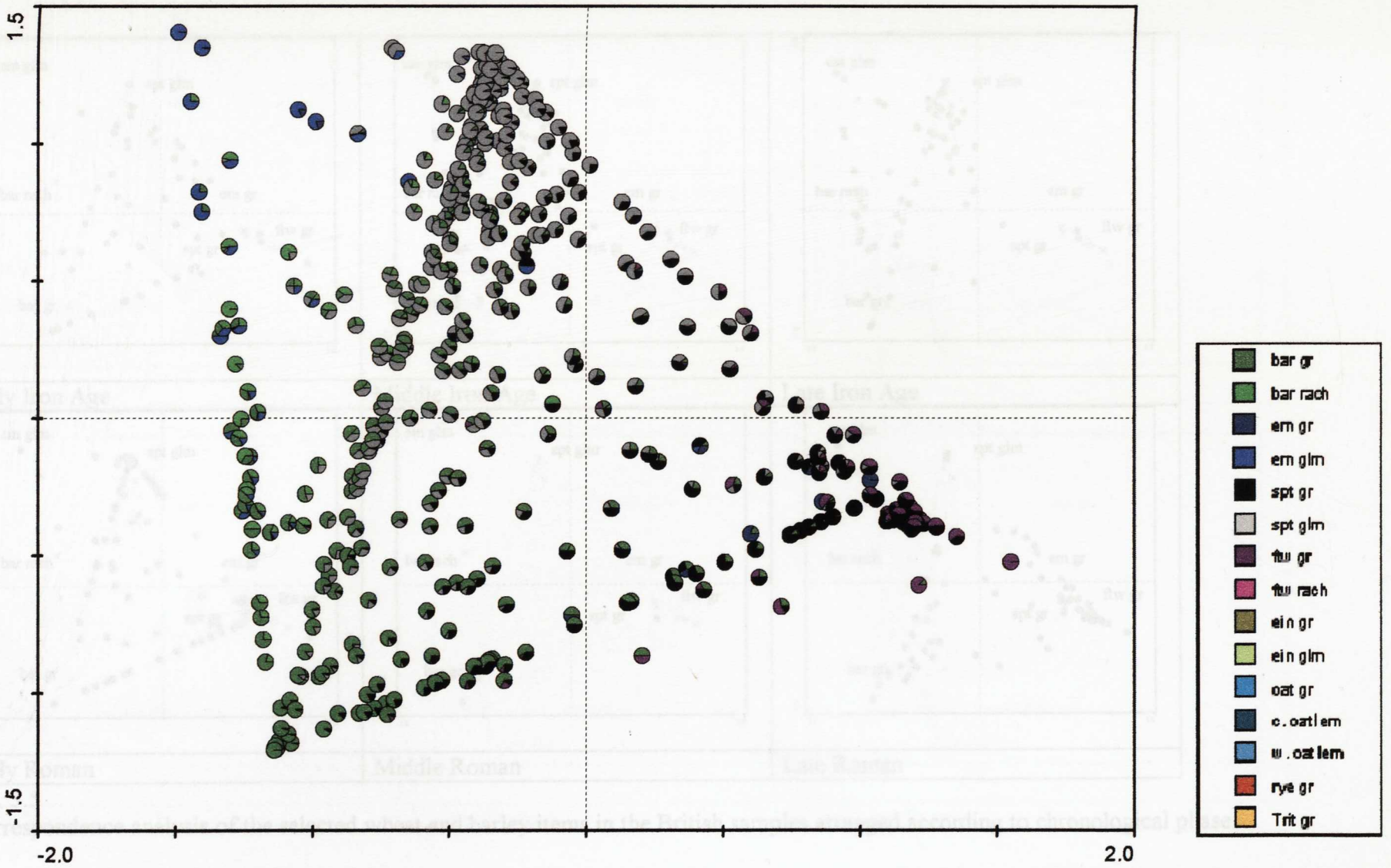


Fig. 3.4 (continued)
(b) Plot of samples showing the relative proportions of selected wheat and barley items (all samples).

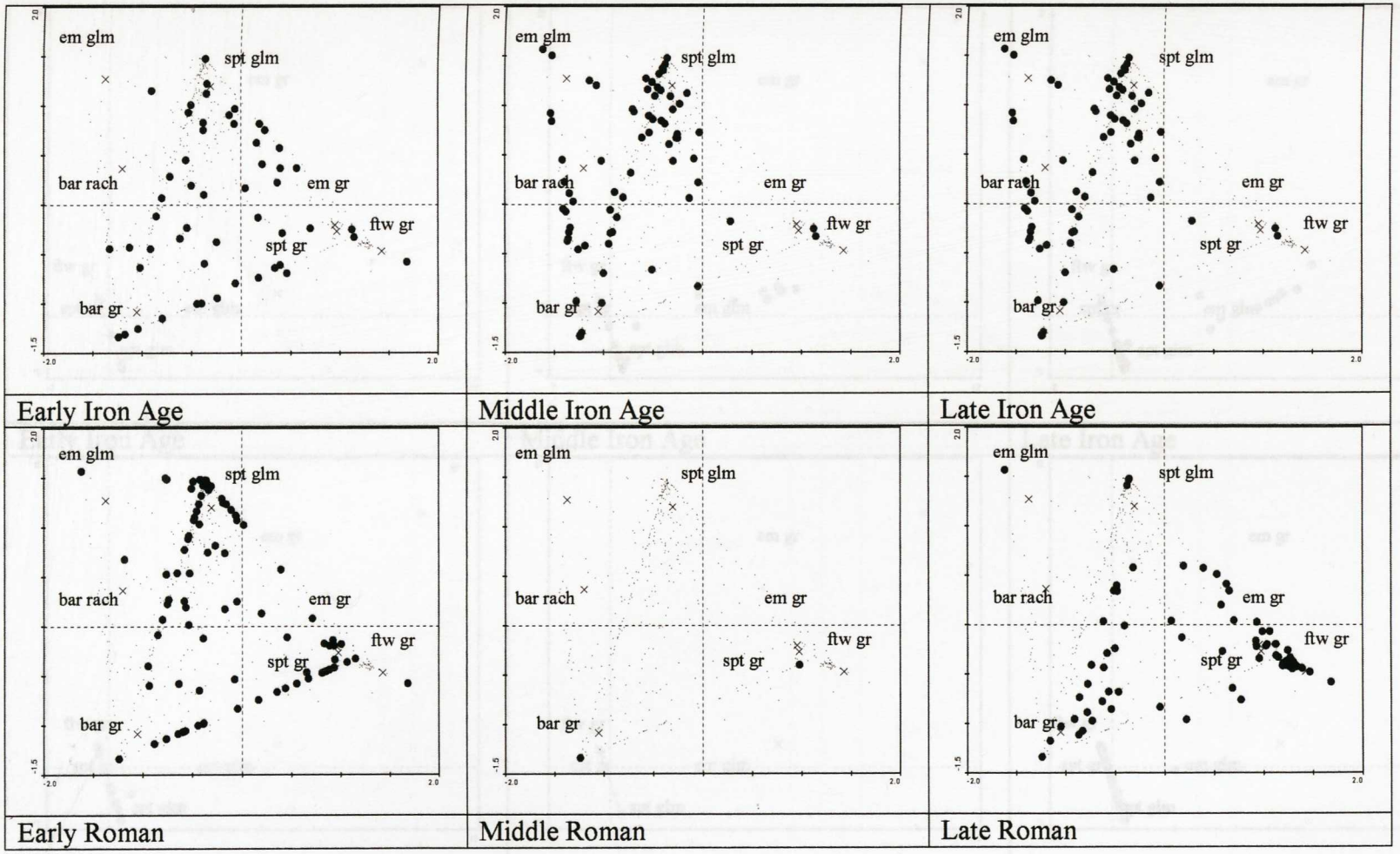


Fig. 3.5
Correspondence analysis of the selected wheat and barley items in the British samples arranged according to chronological phase.

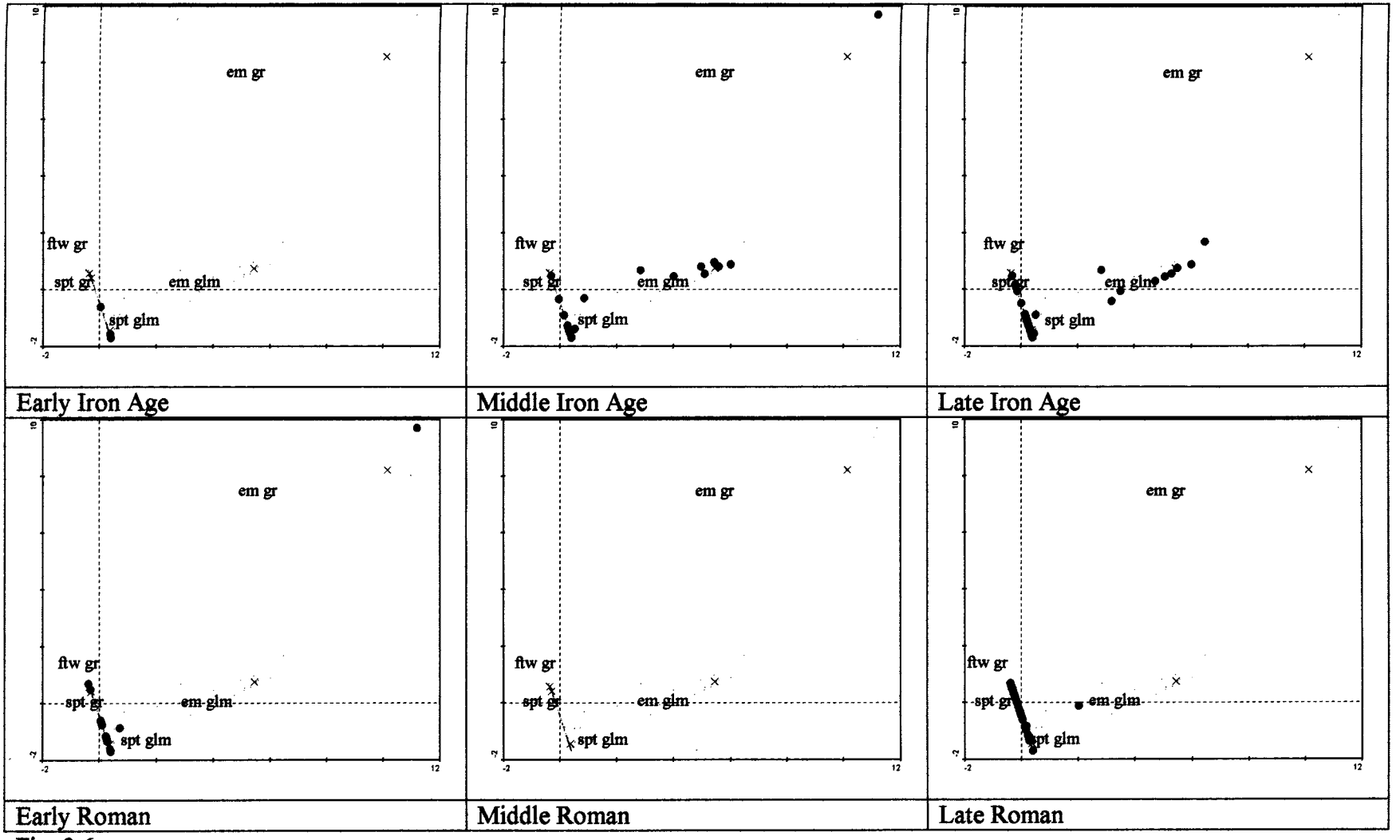


Fig. 3.6
Correspondence analysis of all highland samples with the selected wheat items arranged according to phases within each period.

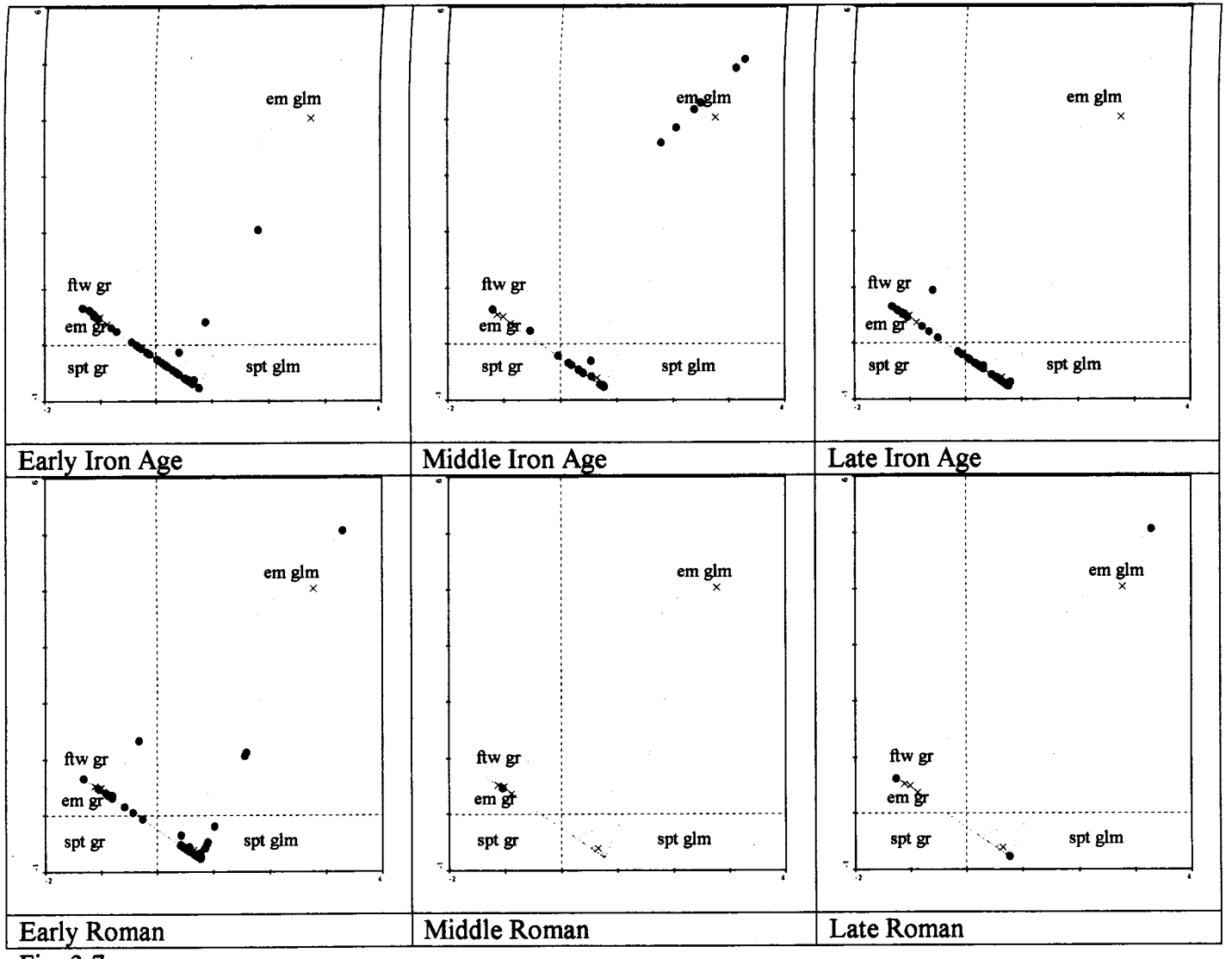


Fig. 3.7
Correspondence analysis of all lowland samples with the selected wheat items arranged according to phases within each period.

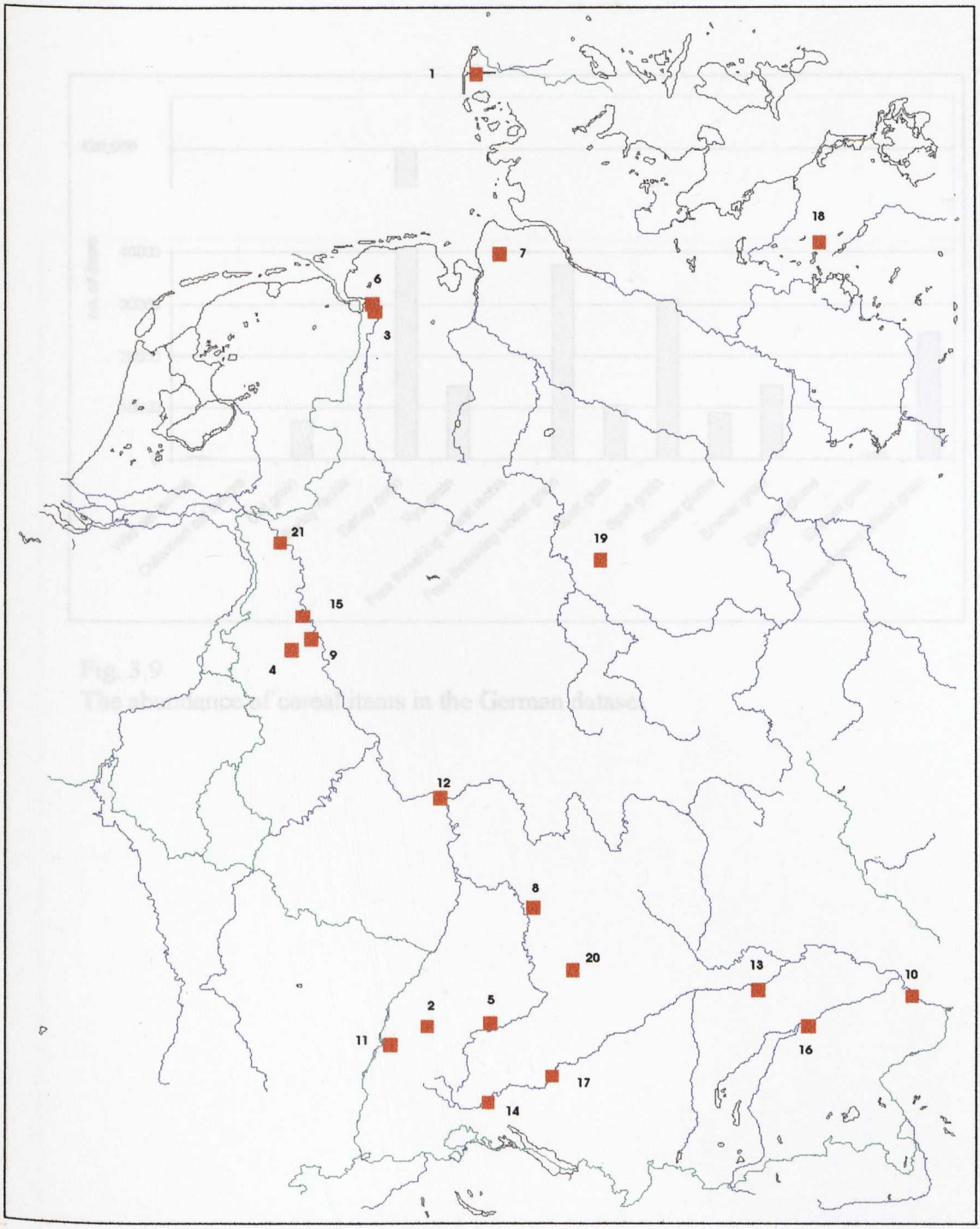


Fig. 3.8
Map of sites included in the German dataset.
1.Archsum, 2.Bad Dürkheim, 3.Bentumersiel, 4.Bergheim, 5.Bondorf, 6.Boomborg/Hatzum, 7.Flögeln, 8.Hardthausen-Lampoldshausen, 9.Köln, 10.Künzing, 11.Lahr Dinglingen, 12.Mainz Lotharpassage, 13.Manching, 14.Mühlheim-Stetten, 15.Neuss, 16.Niederlbach, 17.Riedlingen/Klinge, 18.Schwennenz, 19.Steinbühl, 20.Welzheim, 21.Xanten

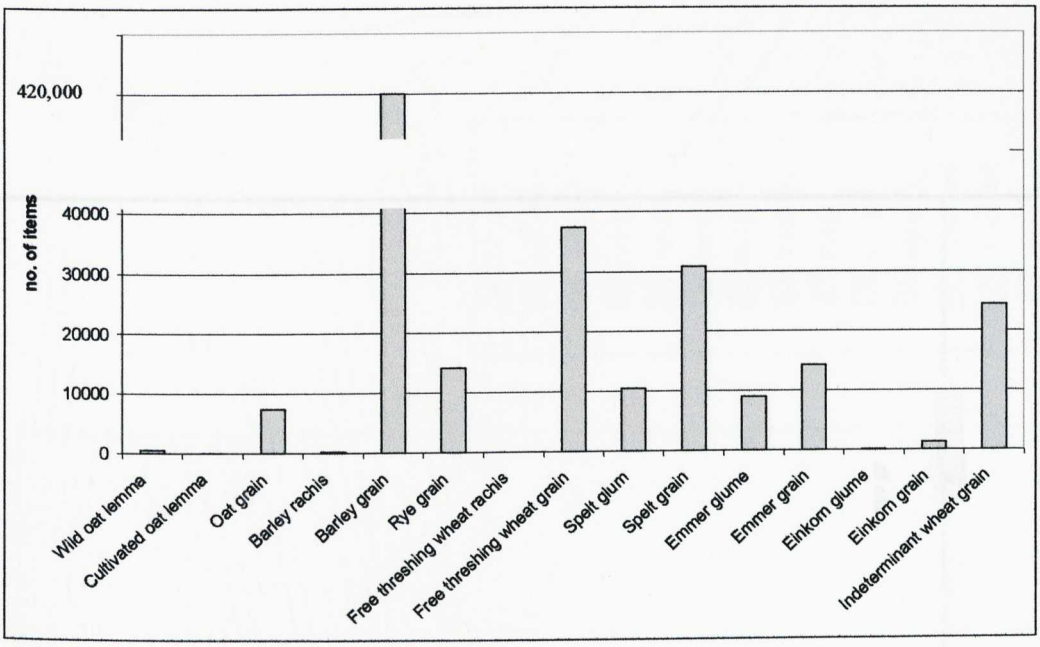


Fig. 3.9
The abundance of cereal items in the German dataset

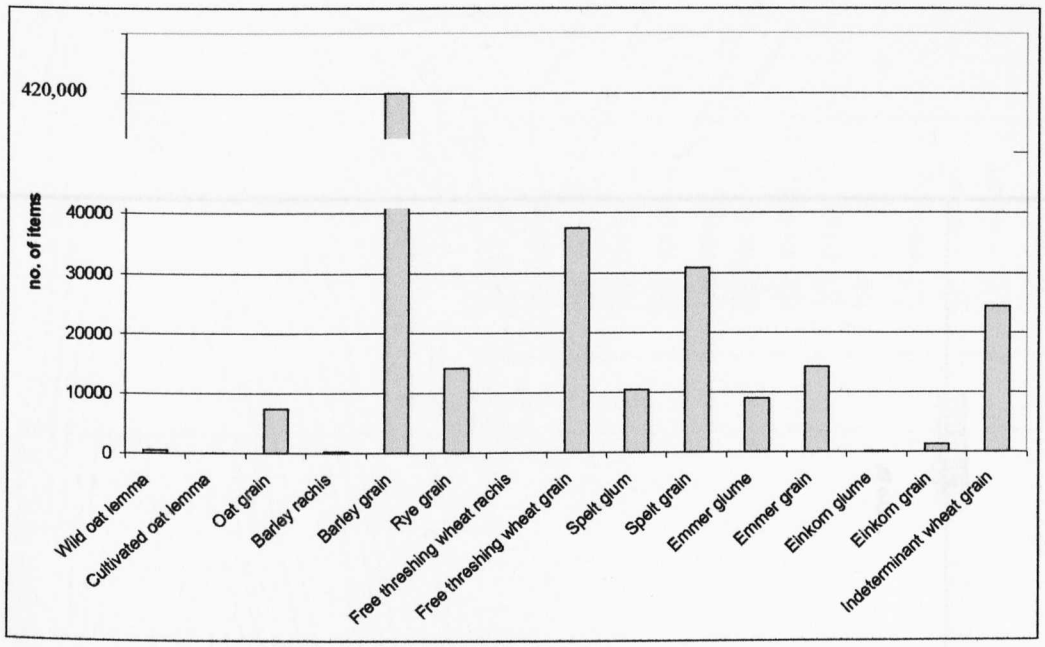


Fig. 3.9
The abundance of cereal items in the German dataset

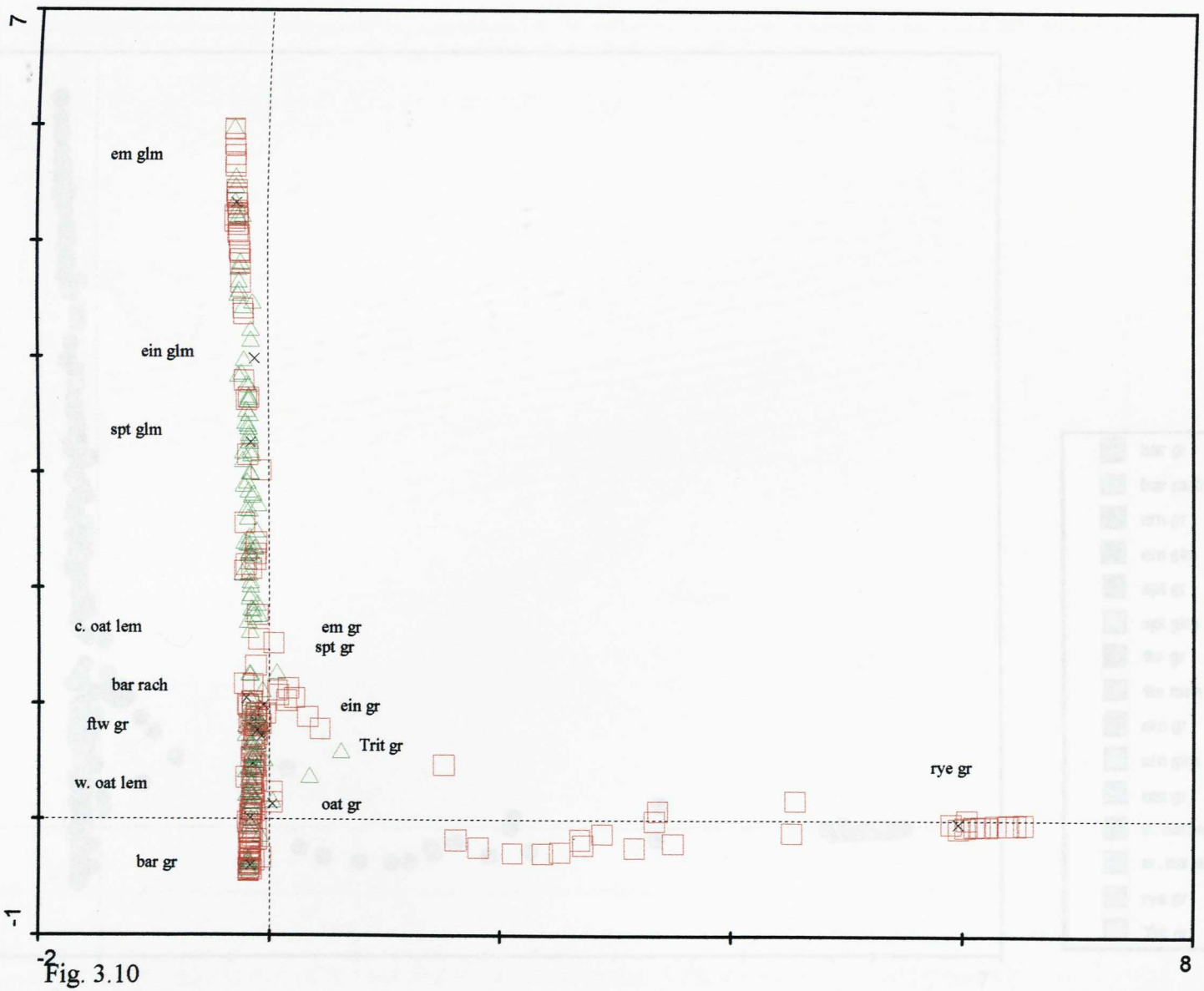


Fig. 3.10
Correspondence analysis plot of all taxa/plant parts in the German samples (coded by period).
(a) Plot of taxa/plant parts and samples. Red squares=Roman; green triangles=Iron Age; cross=items. Mixed period samples left blank.

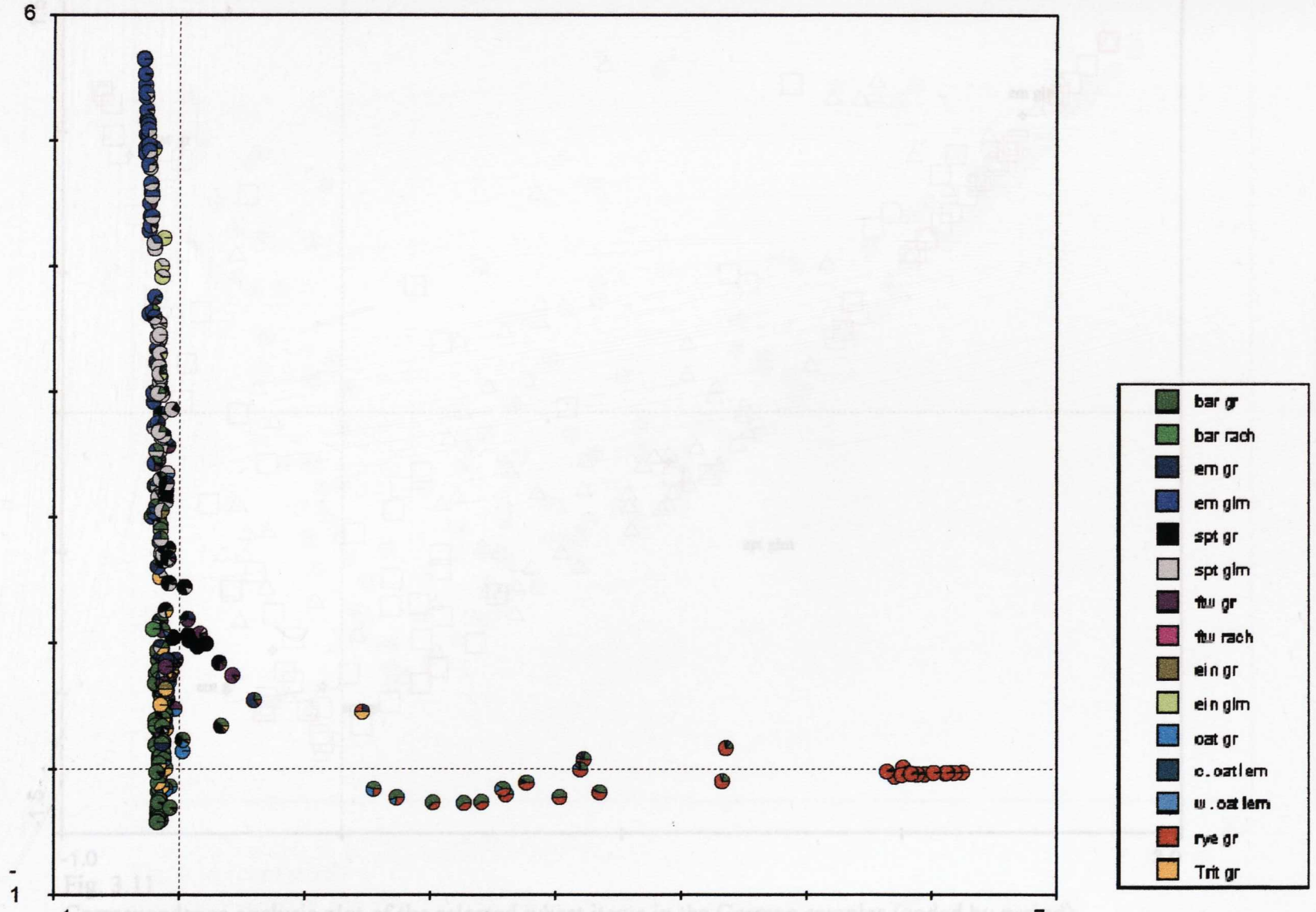


Fig. 3.10 (continued)
(b) Plot of samples showing the relative proportions of all items (all samples).

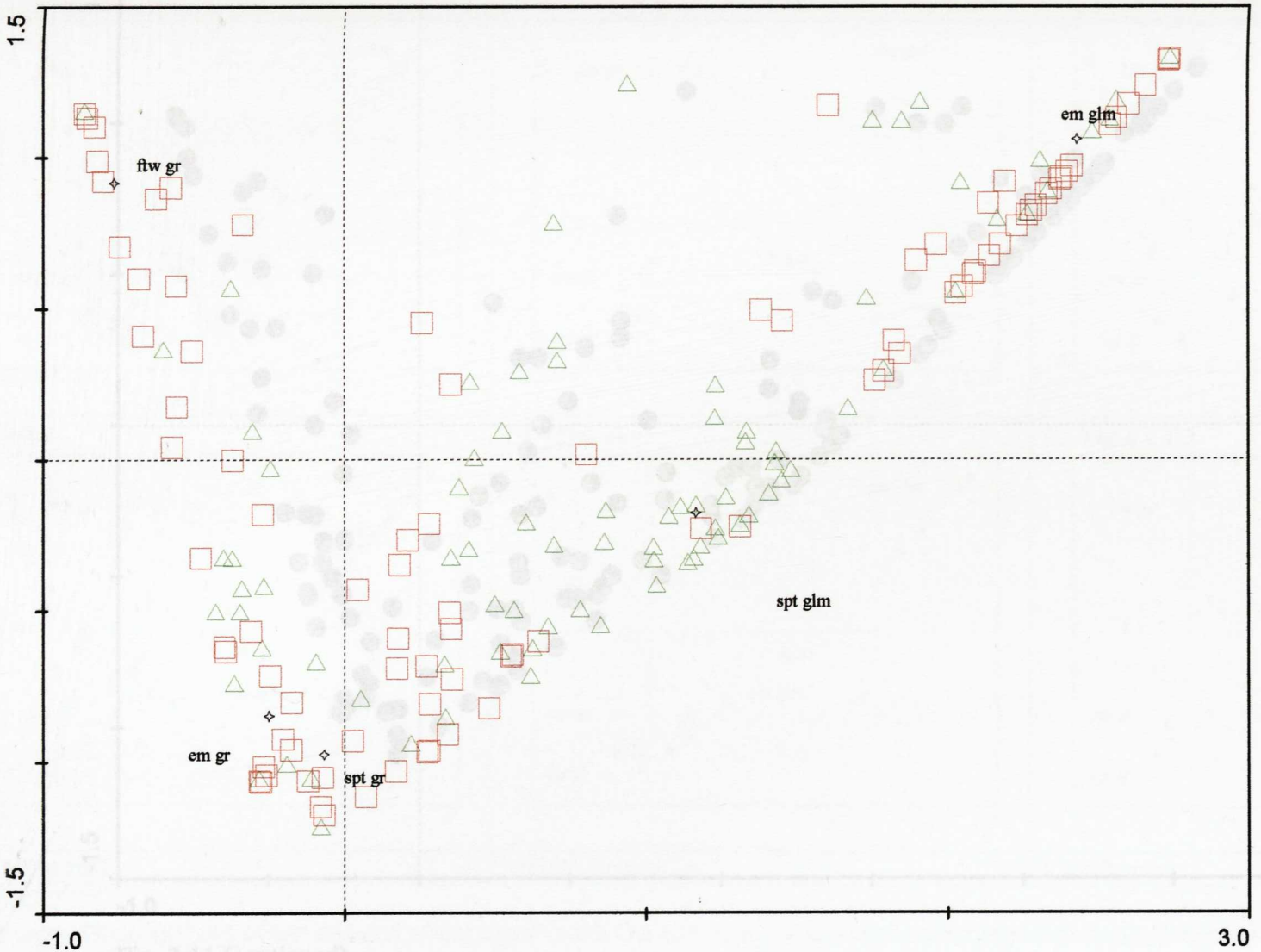


Fig. 3.11
Correspondence analysis plot of the selected wheat items in the German samples (coded by period).
(a) Plot of taxa/plant parts and samples. Red squares=Roman; green triangles=Iron Age; stars=items. Mixed period samples left blank.

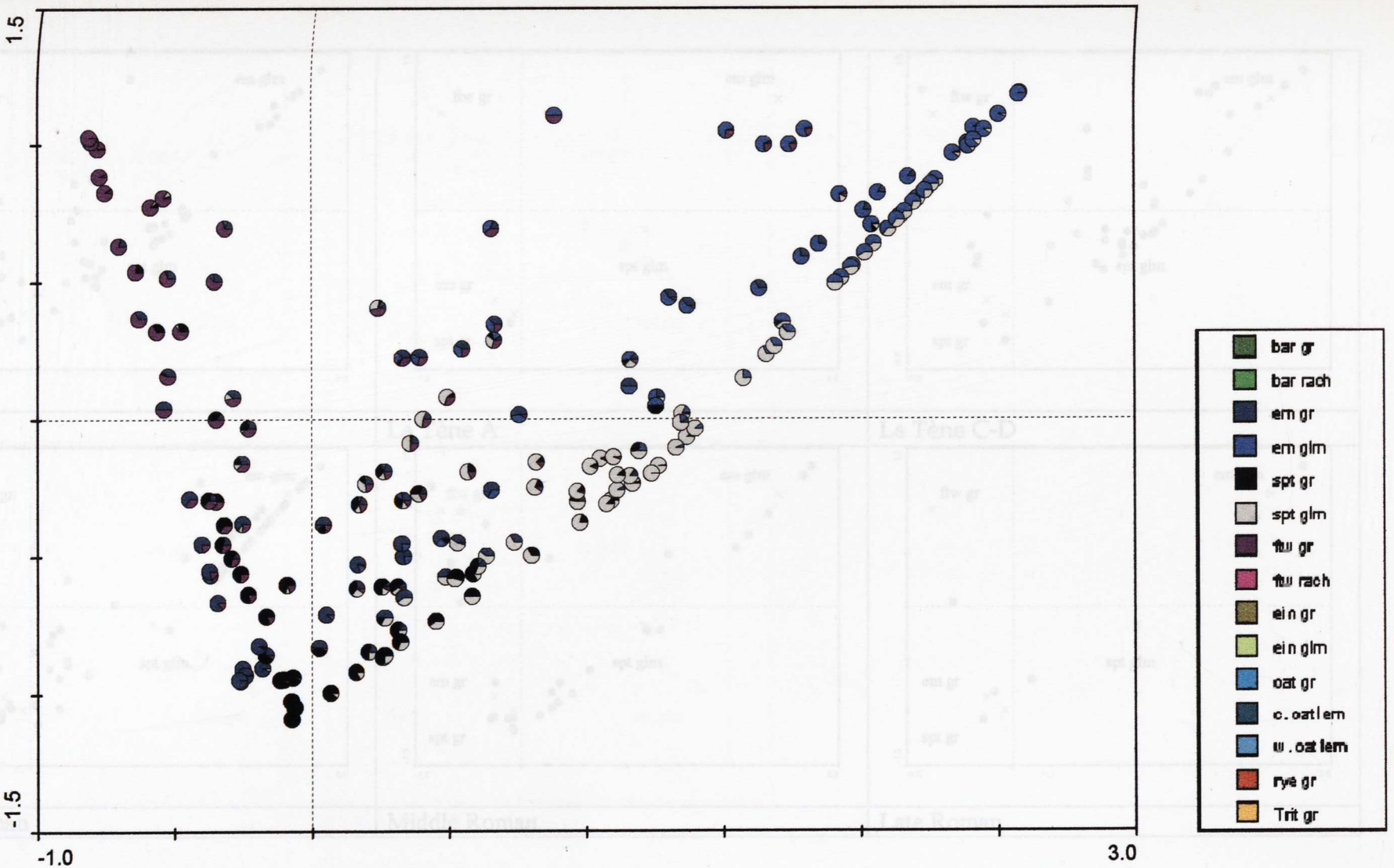


Fig. 3.11 (continued)
(b) Plot of samples showing the relative proportions of the selected wheat items (all samples).

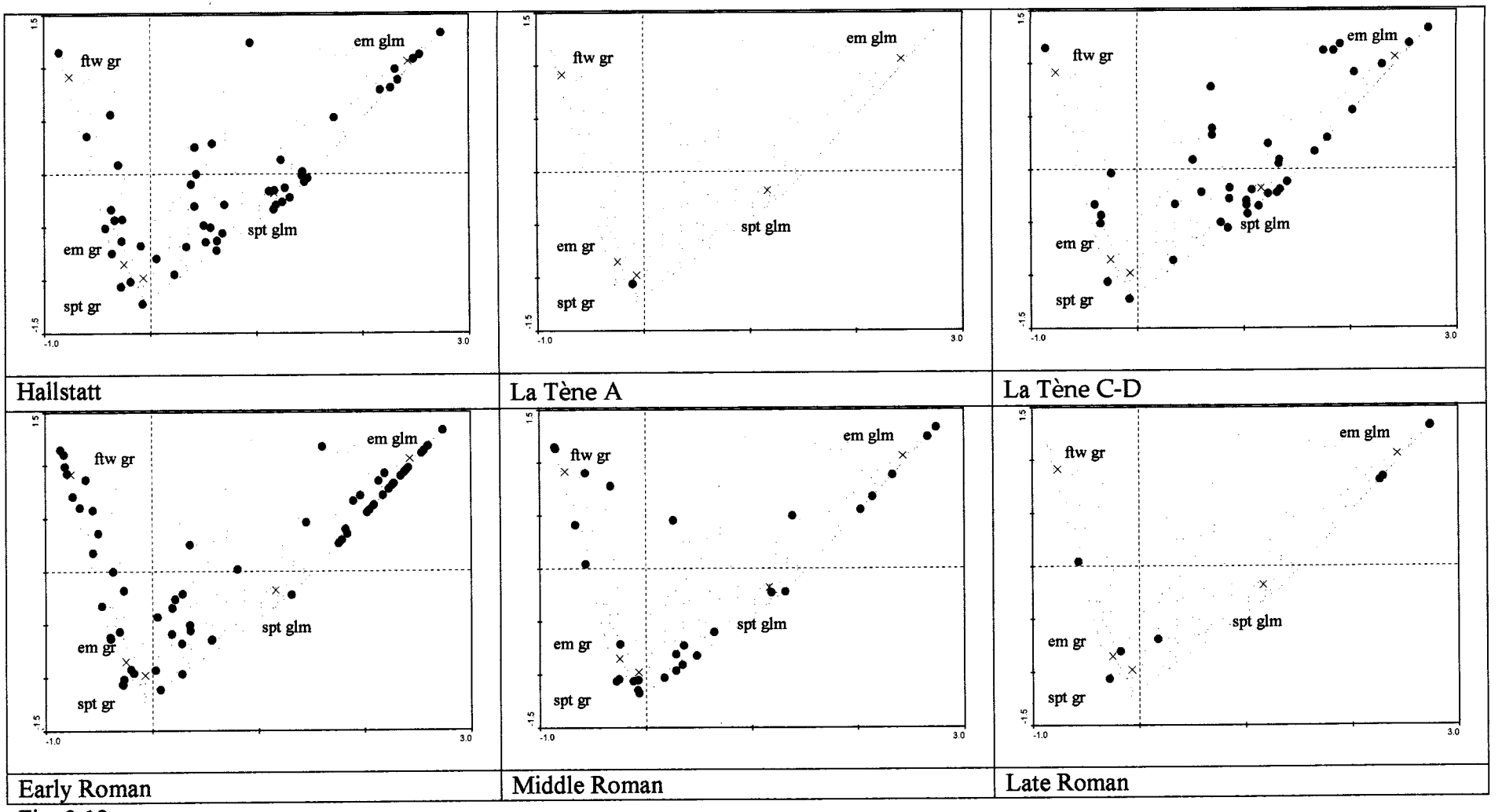


Fig. 3.12
Correspondence analysis of the selected wheat items in the German samples arranged according to chronological phase.

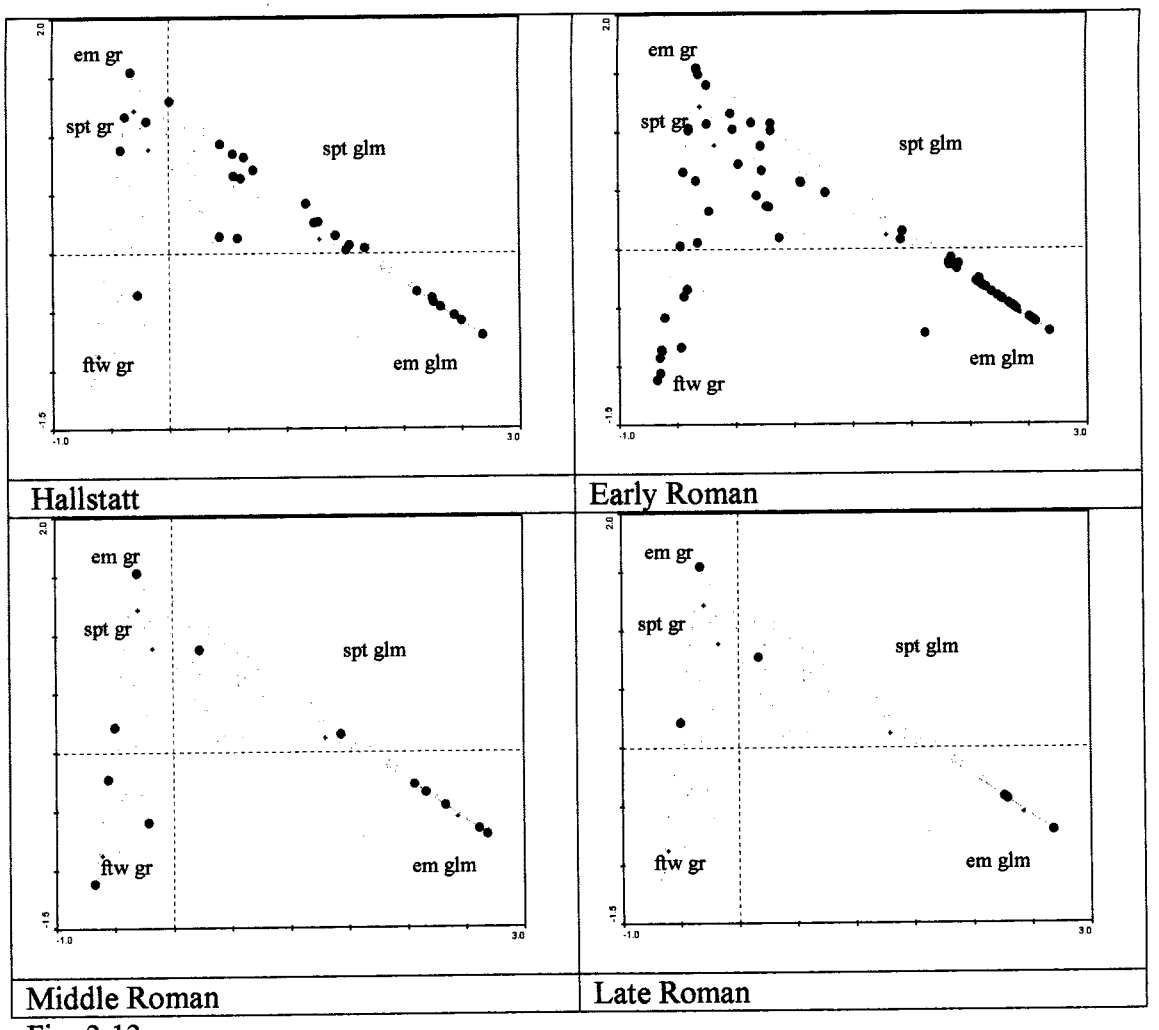


Fig. 3.13
Correspondence analysis of northern German samples with the selected wheat items arranged according to chronological phase.

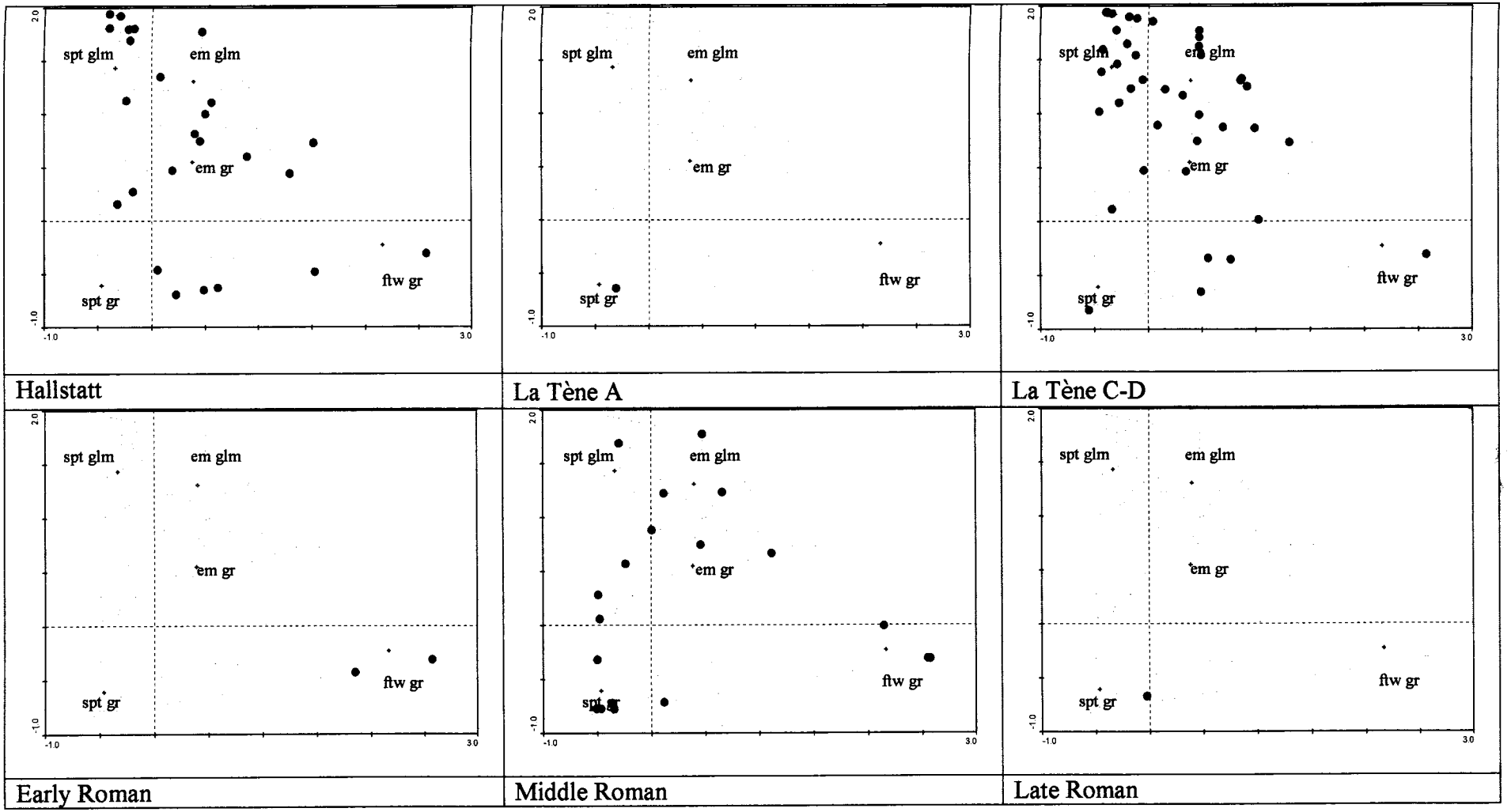


Fig. 3.14
Correspondence analysis of southern German samples with the selected wheat items arranged according to chronological phase.

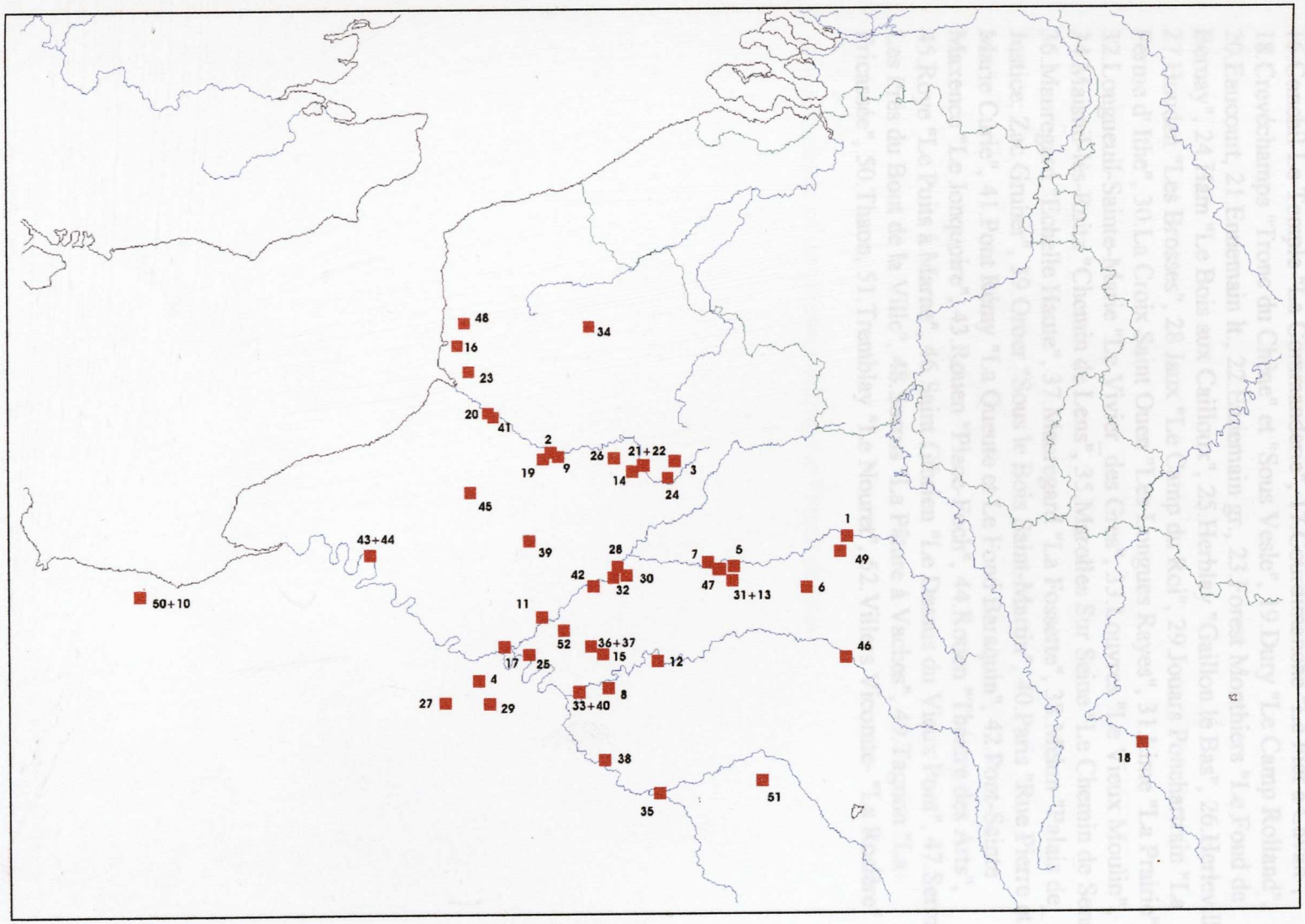


Fig. 3.15
Map of the sites included in the French dataset.

Key to Fig. 3.15
1.Acy-Romance "La Warde", 2.Amiens "Zac Cathedrale," 3.Attilly, 4.Bailly, 5.Bazoches-Sur-Vesle "Les Chantraines", 6.Betheny, 7.Bucy-Le-Long "Le Grand Marais", 8.Bussy-St-Georges "Le Champ Fleuri Nord", 9.Cagny "Ferme de L' Epinette", 10.Cairon, 11.Chambly "La Marnière", 12.Changis-Sur-Marne "Les Pétreaux", 13.Ciry-Salsogne "Le Bruy", 14.Cizancourt, 15.Compans "Ouest du Parc", 16.Conchil Le Temple "La Commanderie", 17.Courdimanche "Le Fief à Cavan", 18.Crevéchamps "Tronc du Chêne" et "Sous Vesle", 19.Dury "Le Camp Rolland", 20.Eaucourt, 21.Ennemain lt., 22.Ennemain gr., 23.Forest Monthiers "Le Fond de Bernay", 24.Ham "Le Bois aux Cailloux", 25.Herblay "Gaillon le Bas", 26.Herleville, 27.Houdan "Les Brosses", 28.Jaux "Le Camp du Roi", 29.Jouars Ponchartrain "La Ferme d' Ithe", 30.La Croix Saint Ouen "Les Longues Rayes", 31.Lime "La Prairie", 32.Longueuil-Sainte-Marie "Le Vivier_des Gres", 33.Louvres "Le Vieux Moulin", 34.Maisnil-lès-Ruitz "Chemin de Lens", 35.Marolles Sur Seine "Le Chemin de Sens", 36.Mauregard "Echelle Haute", 37.Mauregard "La Fossette", 38.Melun "Palais de_ Justice: Zac Gruber", 39.Oroer "Sous le Bois Saint-Martin", 40.Paris "Rue Pierre et Marie Curie", 41.Pont Rémy "La Queute et Le Fond Baraquin", 42.Pont-Sainte Maxence "Le Jonquoire", 43.Rouen "Place-Foch", 44.Rouen "Théatre des Arts", 45.Roye "Le Puits à Marne", 46.Saint Gibrien "Le Dessus du Vieux Pont", 47.Sermoise Les Prés du Bout de la Ville", 48.Sorrus "La Pâture á Vaches", 49.Tagnon "La Fricassée", 50.Thaon, 51.Tremblay "Le Nouret", 52.Villers Vicomte- "La Rosière"

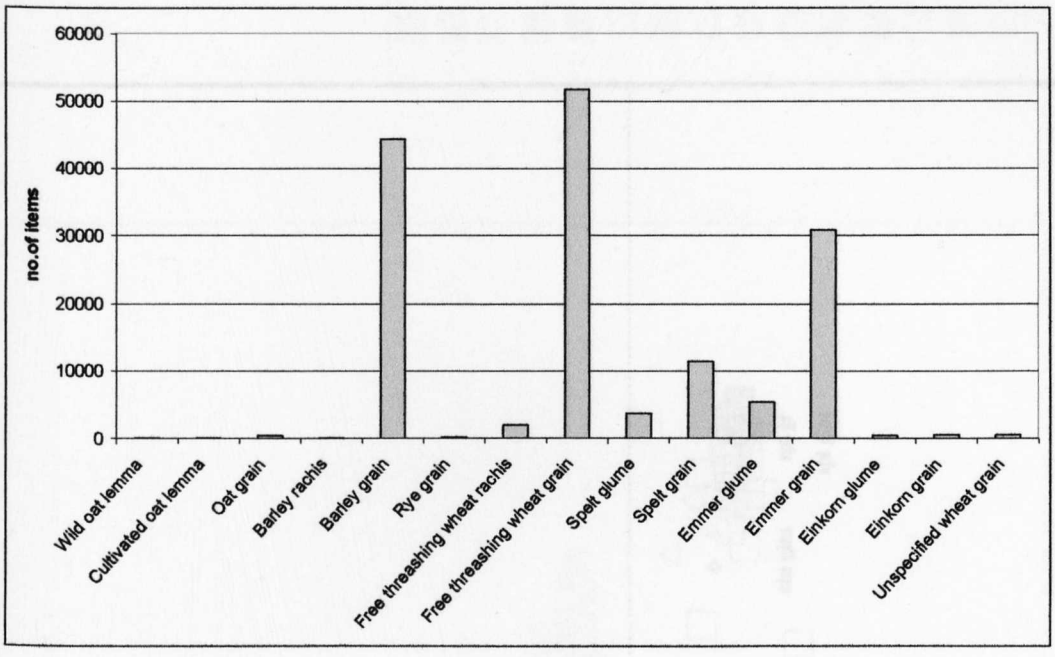


Fig. 3.16
The abundance of cereal items within the French dataset.

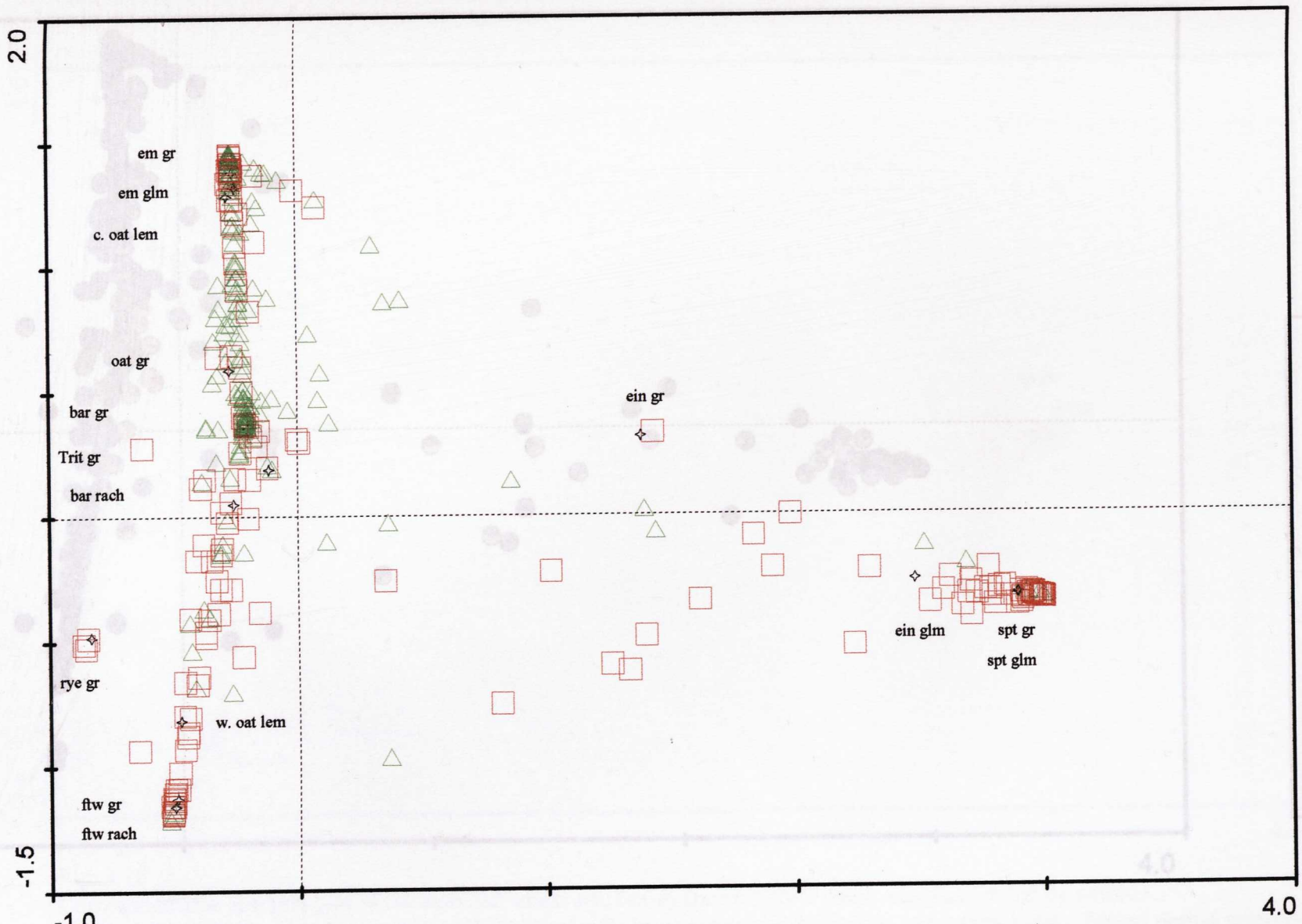


Fig.3.17

Correspondence analysis plot of all taxa/plant parts in the French samples (coded by period).

(a) Plot of taxa/plant parts and samples. Red squares=Roman; green triangles=Iron Age; stars=items. Mixed period samples left blank.

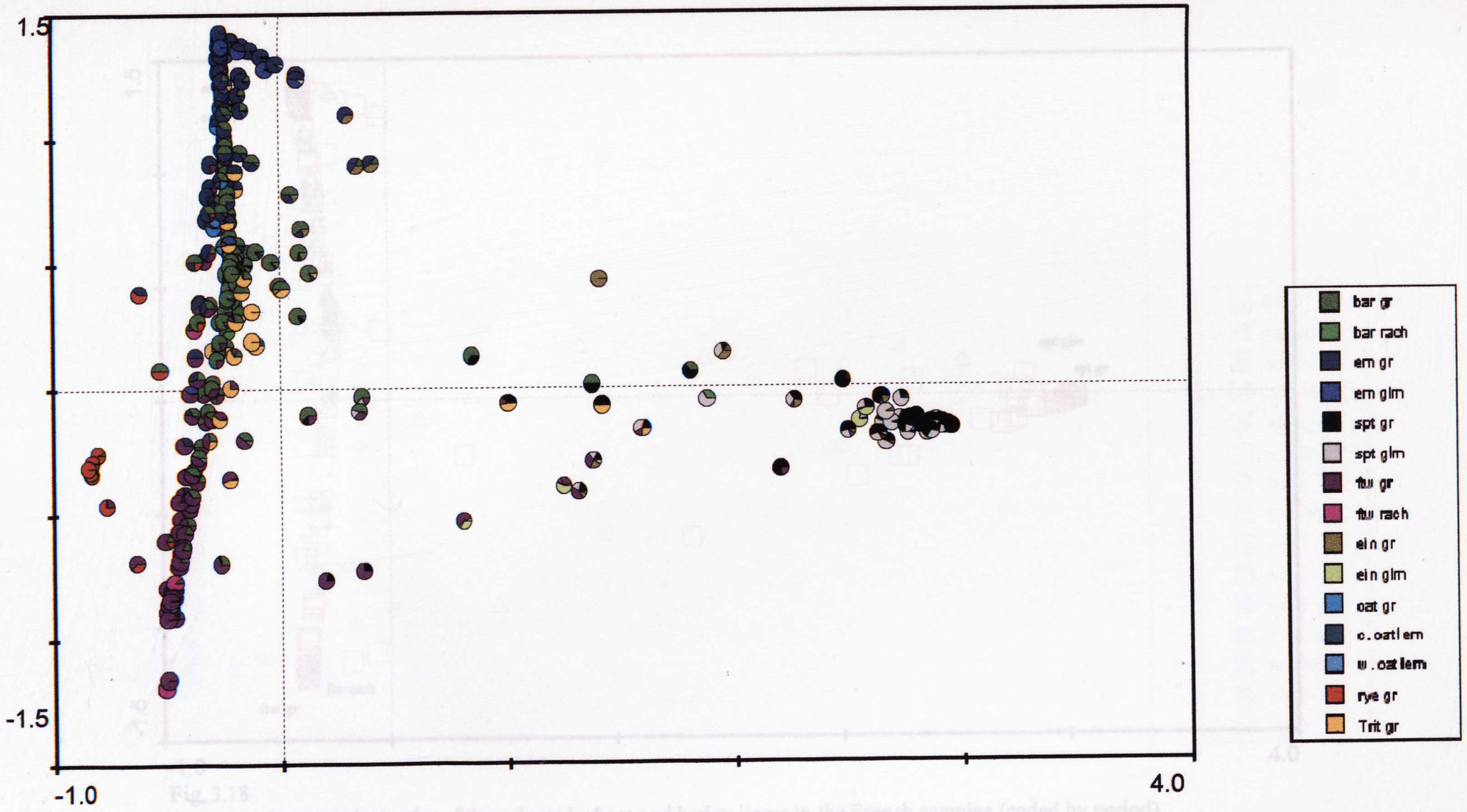


Fig. 3.17 (continued)
(b) Plot of samples showing the relative proportions of all items (all samples).

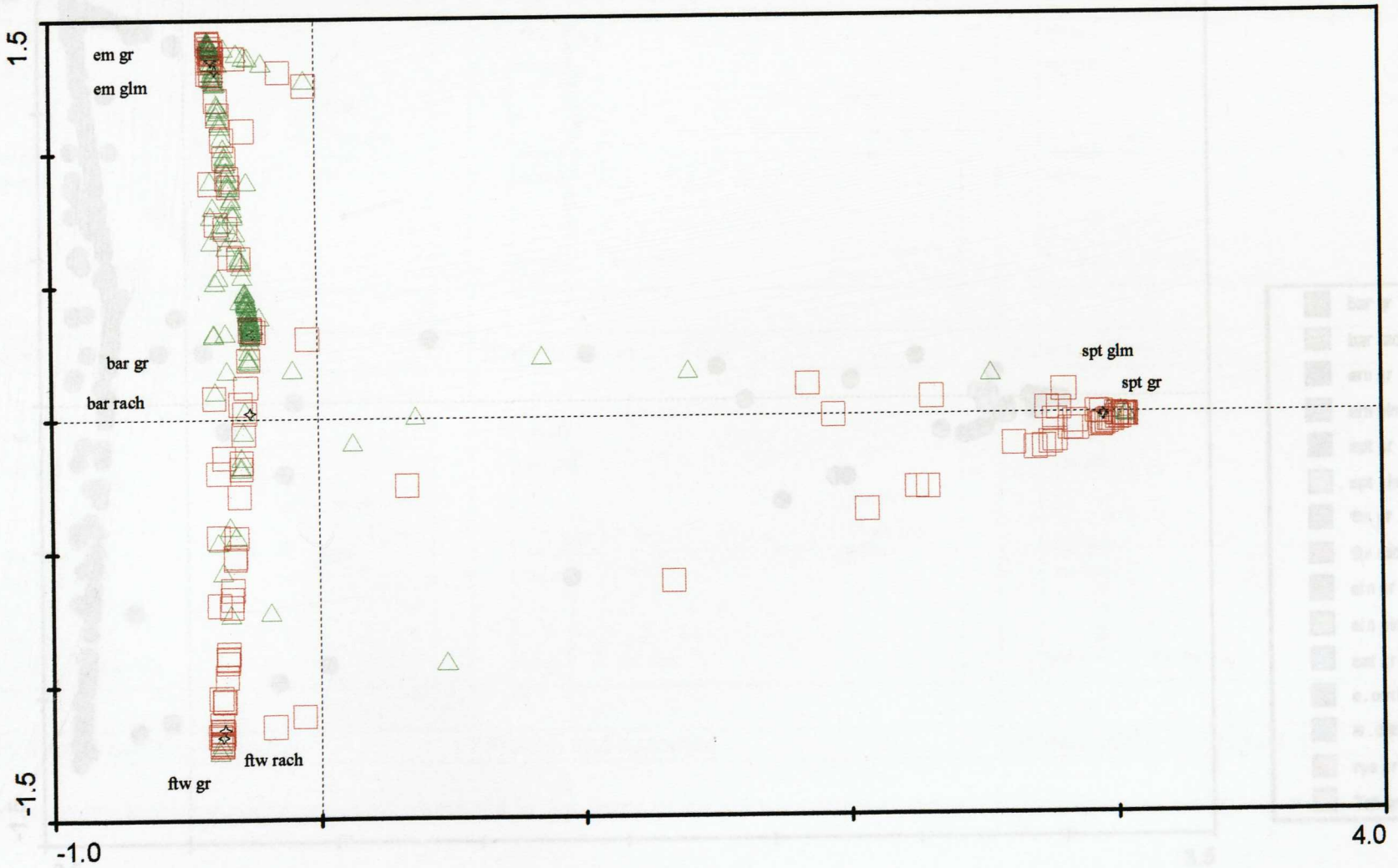


Fig. 3.18
Correspondence analysis plot of the selected wheat and barley items in the French samples (coded by period).
(a) Plot of taxa/plant parts and samples. Red squares=Roman; green triangles=Iron Age; stars=items. Mixed period samples left blank.

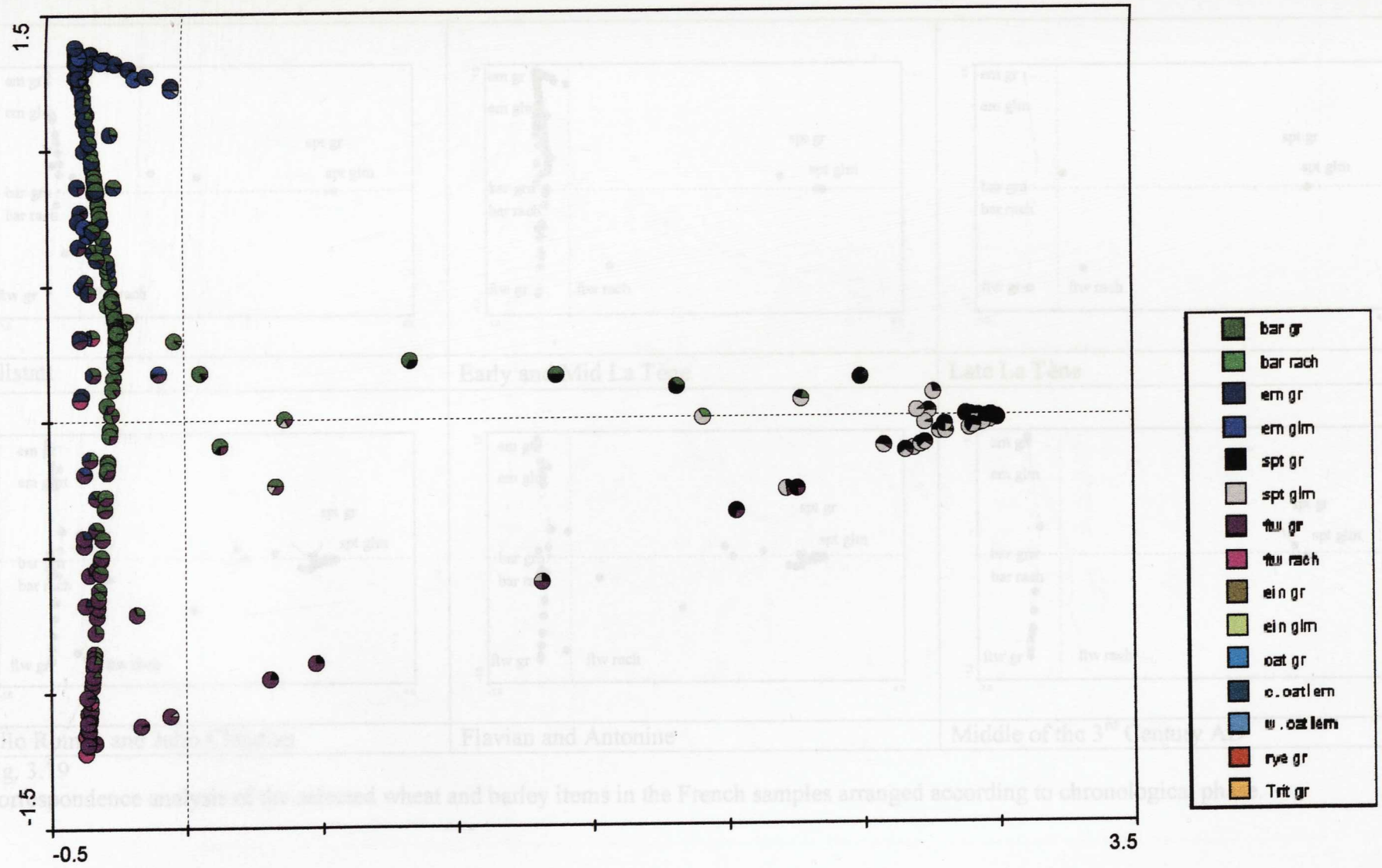
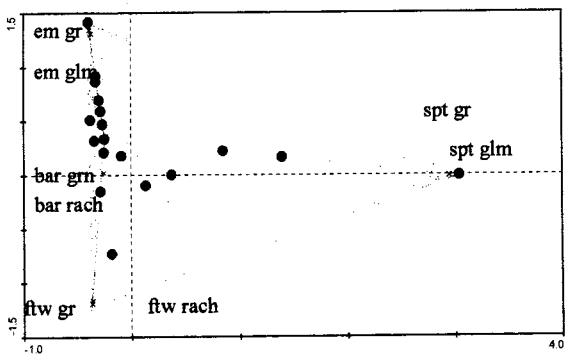
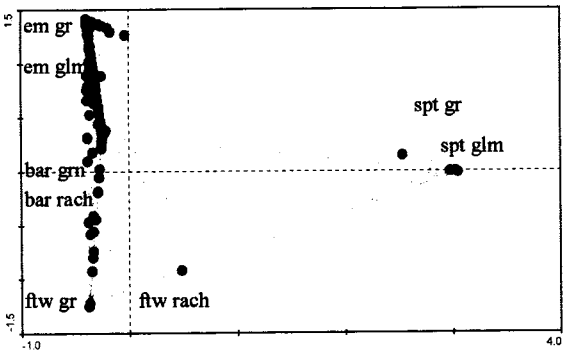


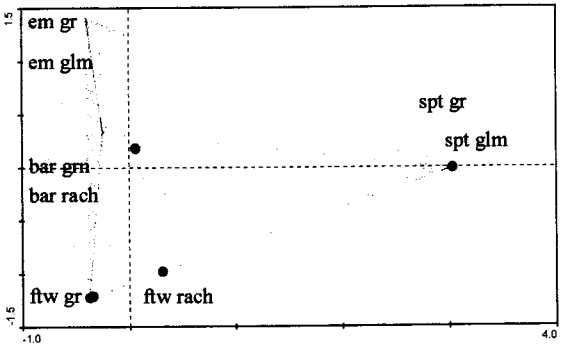
Fig. 3.18 (continued)
(b) Plot of samples showing the relative proportions of the selected wheat and barley items (all samples).



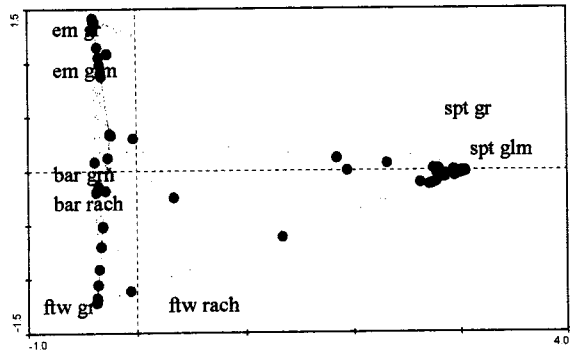
Hallstatt



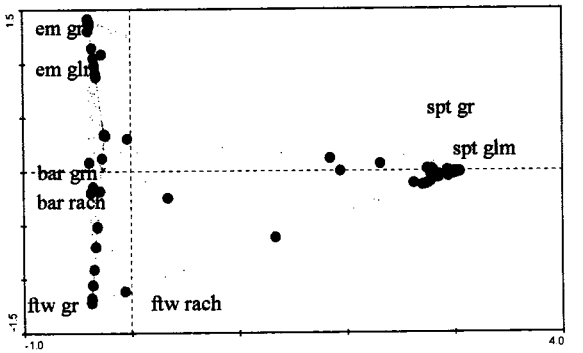
Early and Mid La Tène



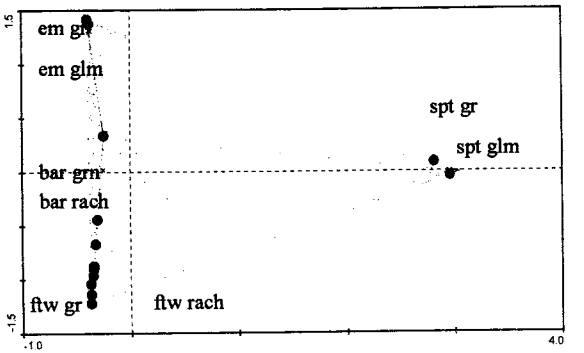
Late La Tène



Gallo Roman and Julio Claudian



Flavian and Antonine



Middle of the 3rd Century AD

Fig. 3.19
Correspondence analysis of the selected wheat and barley items in the French samples arranged according to chronological phase.

Fig. 3.20
Map of sites included in the Dutch dataset.

Key to Fig. 3.20

1. Aardenburg, 2. Abbenbroek 17-22, 3. Alphen Aan Den Rijn-Rijksweg 11 (locatie 3), 4. Alphen Aan Den Rijn-julianastraat, 5. Assendelver Polders site c, 6. Assendelver Polders site d, 7 Assendelver Polders site f, 8. Assendelver Polders site h, 9. Assendelver Polders site k, 10. Assendelver Polders site p, 11. Borculo, 12. Bunnik-Singel West, 13. Bunnik-Vechten Castellum, 14. Castricum-Oosterbuurt, 15. Cuijk-Havenlaan, 16. Cuijk-Nielt, 17. Dalfsen, 18. Den Haag-Scheveningse Weg-Tempel, 19. Dommelen-Kerkakkers ii, 20. Duifpolder 11-17 (huis 2), 21. Ede-Veldhuizen, 22. Emst, 23. Enschede-Elferinkse Es, 24. Geervliet 10-172, 25. Geervliet 17-55, 26. Geldermalsen-Kalenberg, 27. Groesbeek-Klein Amerika, 28. Groningen-Paddepoel, 29. Herwen-Rijnwaarden, 30. Herveskesklooster, 31. Katwijk-Zanderij, 32. Kesteren-De Woerd, 33. Leeuwarden-Bullepolder, 34. Leidsche Rijn lr2-1997, 35. Lieshout/lierop, 36. Limmen-Schulpvaart, 37.Maasbracht-Steenakker, 38. Maastricht-Amby, 39. Maastricht-Derlon, 40. Maastricht-Houtmaas, 41. Maastricht-Houtmaas ii, 42. Maastricht-Pandhof, 43. Maastricht-Plankstraat 23, 44. Maastricht-Randwijck ii, 45. Meteren-Lage Blok, 46. Middelstum-Boerdamsterweg, 47. Midden-Delfland 11.17 (Maasland), 48. Midden-Delfland 15.04(Maasland), 49. Midden-Delfland 16.59 (Maasland), 50. Nieuwenhoorn 09-89, 51. Nijmegen-Canisiuscollege, 52. Nijmegen-Canisiuscollege ii, 53 .Nijmegen-Kops Plateau, 54 .Noordbarge-Hooge Loo, 55. Oirlo-Stokven, 56. Oosterhout, 57. Opperdoes, 58. Oss-Ijsselstraat-Rom, 59. Oss-Schalkskamp, 60. Oss-Ussen iv, 61. Oss-Ussen Vijver, 62. Oss-Ussen Westerveld, 63. Ouddorp-Oude Oostdijk, 64. Ouddorp-Oude Ostdijk Revisited, 65. Peelo-De Es, 66. Peelo-Haverland ii, 67. Peins-Oost, 68. Raalte-Raan, 69. Rockanje 08-52, 70. Rockanje 08-53, 71. Rockanje 08-54, 72. Rockanje ii, 73. Rotterdam-Terbregge 06-23, 74. Santpoort-Spanjaardsberg, 75. Schagen-Muggenburg, 76. Schiedam-Kethel, 77. Sneek-Nieuwe Jachthaven, 78. Son en Breugel-Hooidonkse Akkers, 79. Spijkenisse 17-30, 80. Spijkenisse 17-34, 81. Spijkenisse 17-35, 82. Texel-Den Burg-Beatrixlaan, 83. Tritsum, 84. Uitgeest-Floretijnse Veld, 85. Valkenburg-Castellum I, 86. Valkenburg-Castellum ii, 87. Valkenburg-Marktveld ii, 88. Valkenburg-Marktveld iii, 89. Vlaardingen-Broekpolder, 90. Vlaardingen-Hoogstad 6.36, 91. Vlaardingen-Kolpabad 6.123, 92. Vleuten-Balije, 93. Vleuterweide-Wilhelminalaan, 94. Voerendaal-Ten Hove, 95. Wierden-Enter Baanakkers, 96. Wijk Bij Duurstede-De Horden, 97. Wijnaldum-Tjitsma, 98. Wijster, 99. Woerden Hoek Molenstraat /Kazernestraat, 100. Zuidland 16-15, 101. Zuidland 17-27

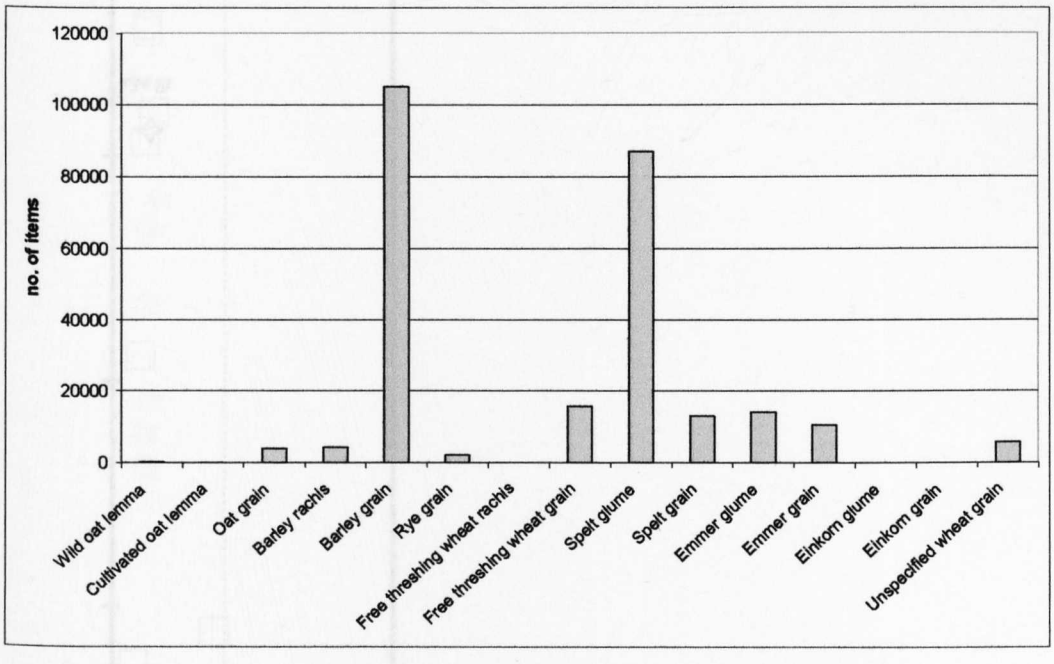


Fig. 3.21
The abundance of cereal items within the Dutch dataset.

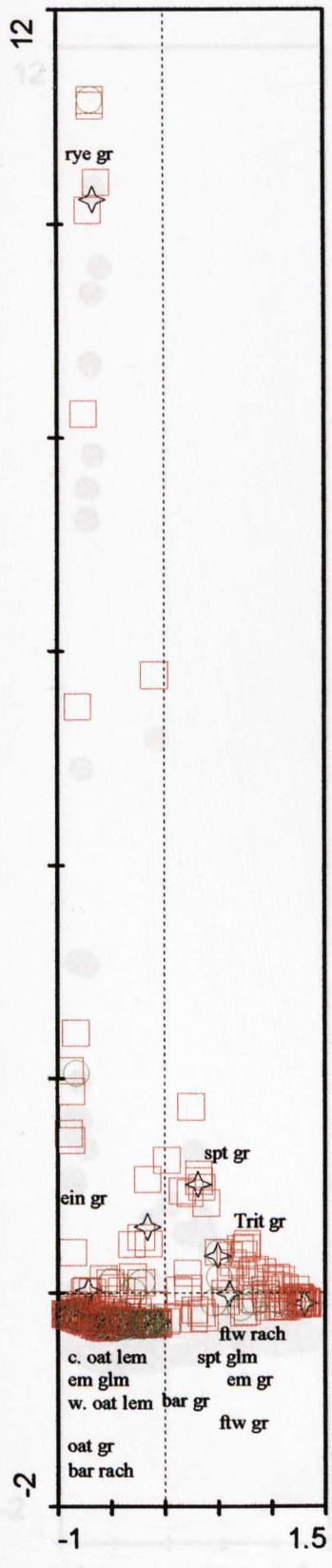


Fig.3.22
Correspondence analysis plot of all taxa/plant parts in the Dutch samples (coded by period).
(a) Plot of taxa/plant parts and samples. Red squares=Roman; green circles =Iron Age; stars=items. Mixed period samples left blank.

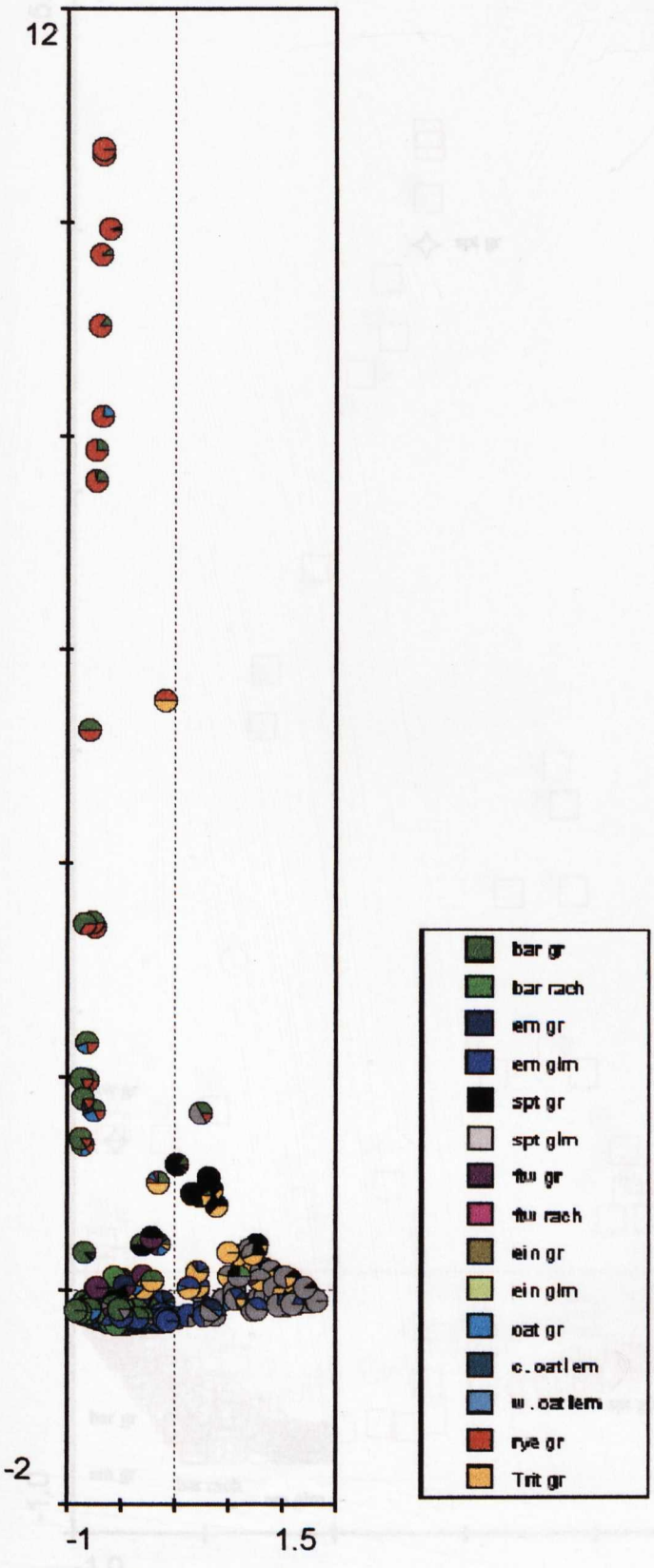


Fig. 3.22 (continued)
(b) Plot of samples showing the relative proportions of all items (all samples).

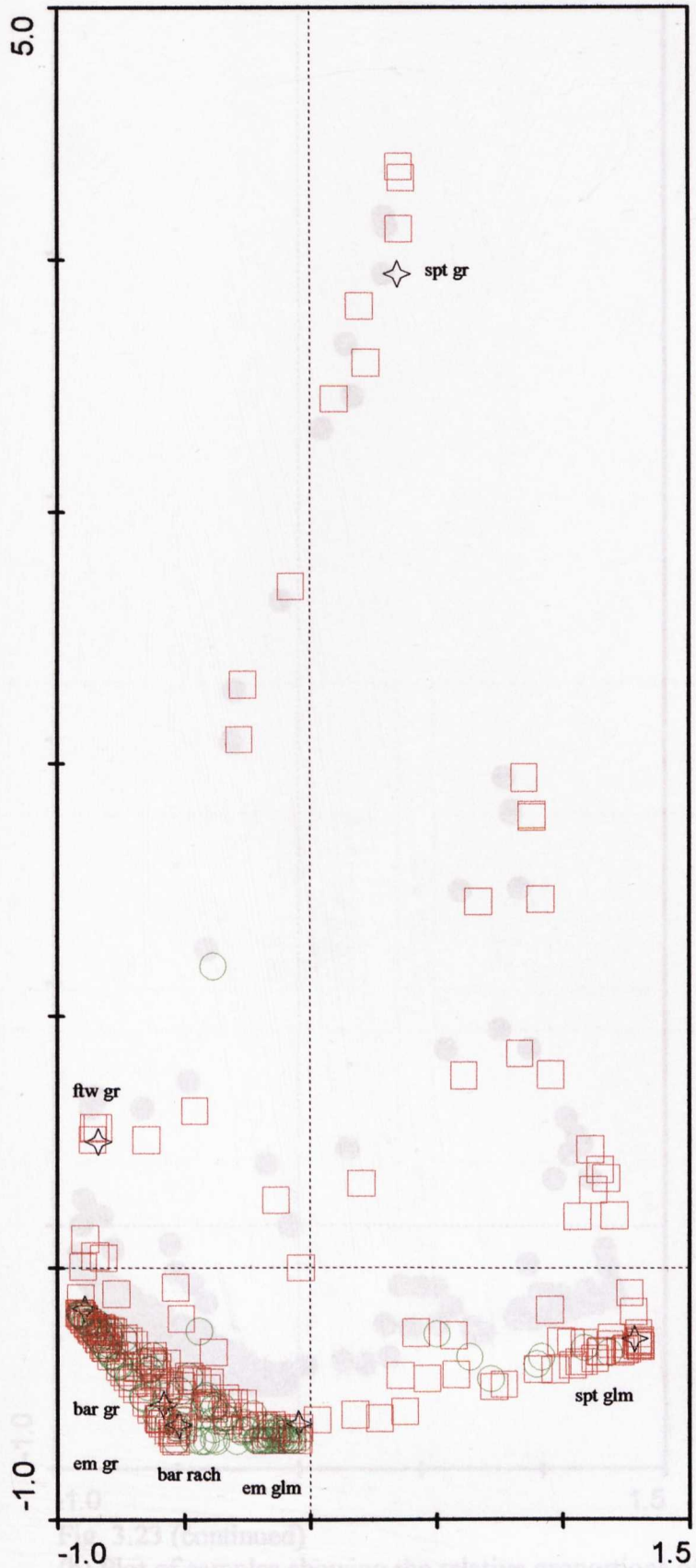


Fig. 3.23

Correspondence analysis plot of the selected wheat and barley items in the Dutch samples (coded by period).

(a) Plot of taxa/plant parts and samples. Red squares=Roman; green circles =Iron Age; stars=items. Mixed period samples left blank.

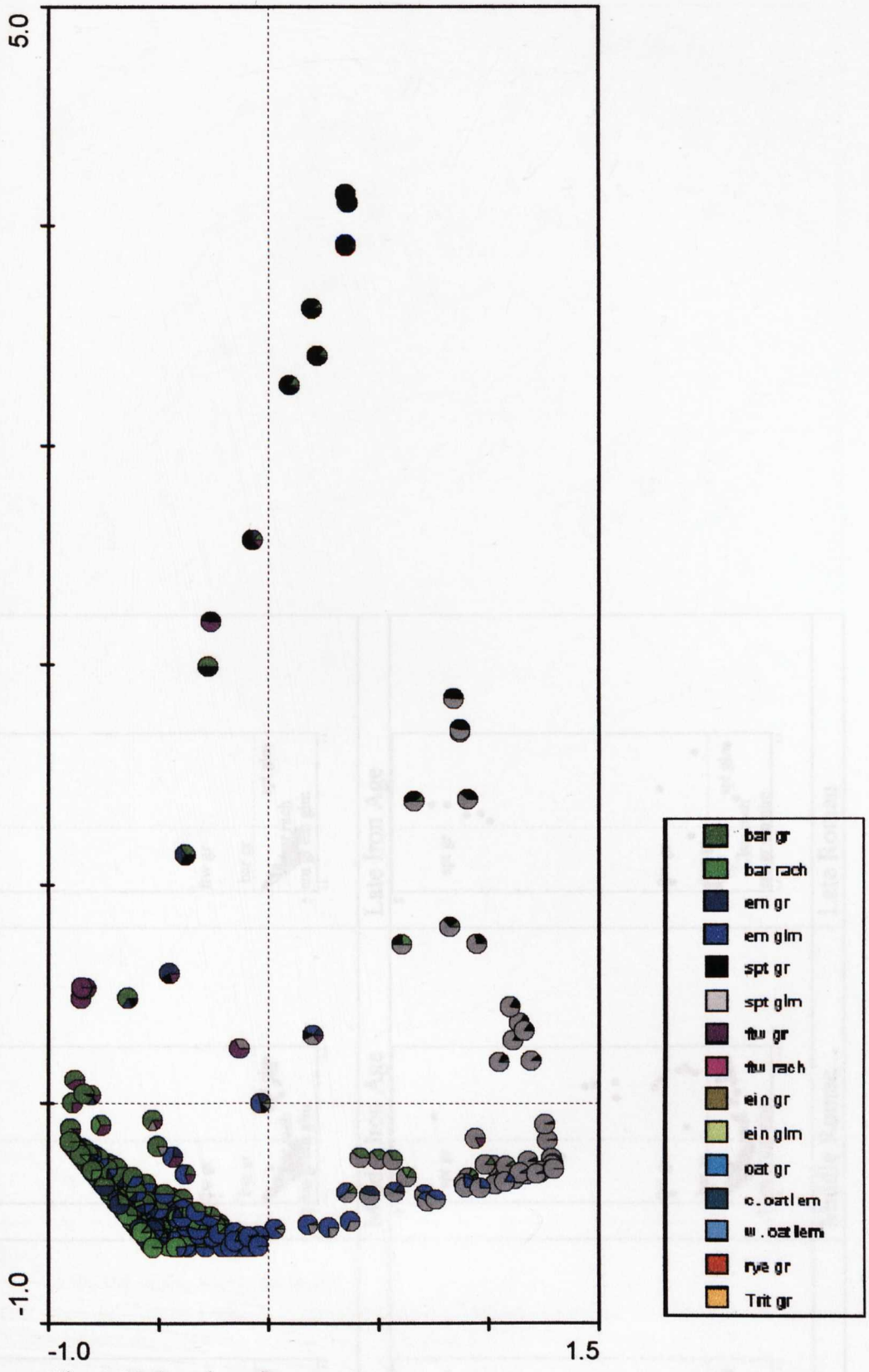


Fig. 3.23 (continued)
(b) Plot of samples showing the relative proportions of the selected wheat and barley items (all samples).

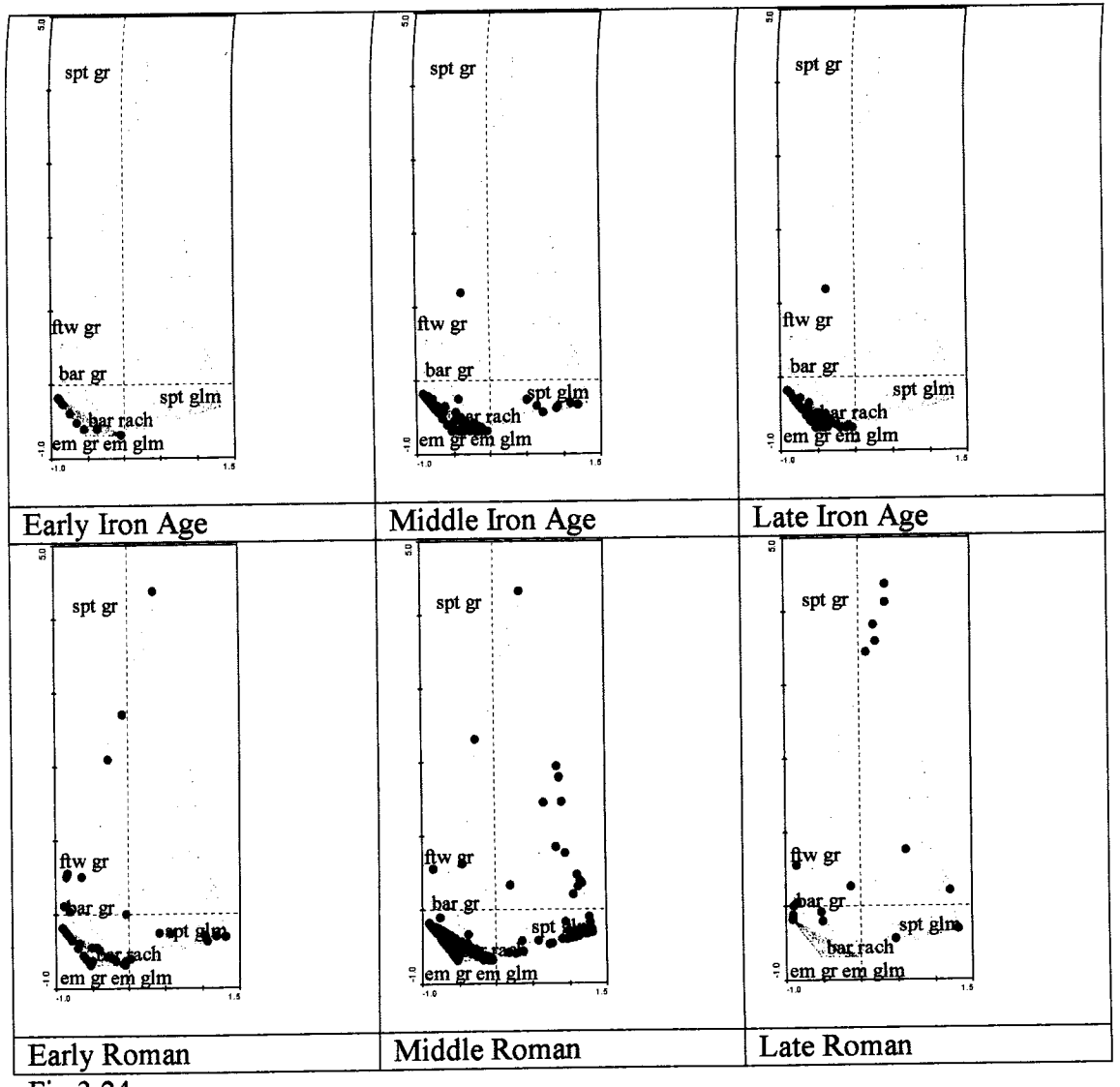


Fig 3.24
Correspondence analysis of the selected wheat and barley items in the Dutch samples arranged according to chronological phase.

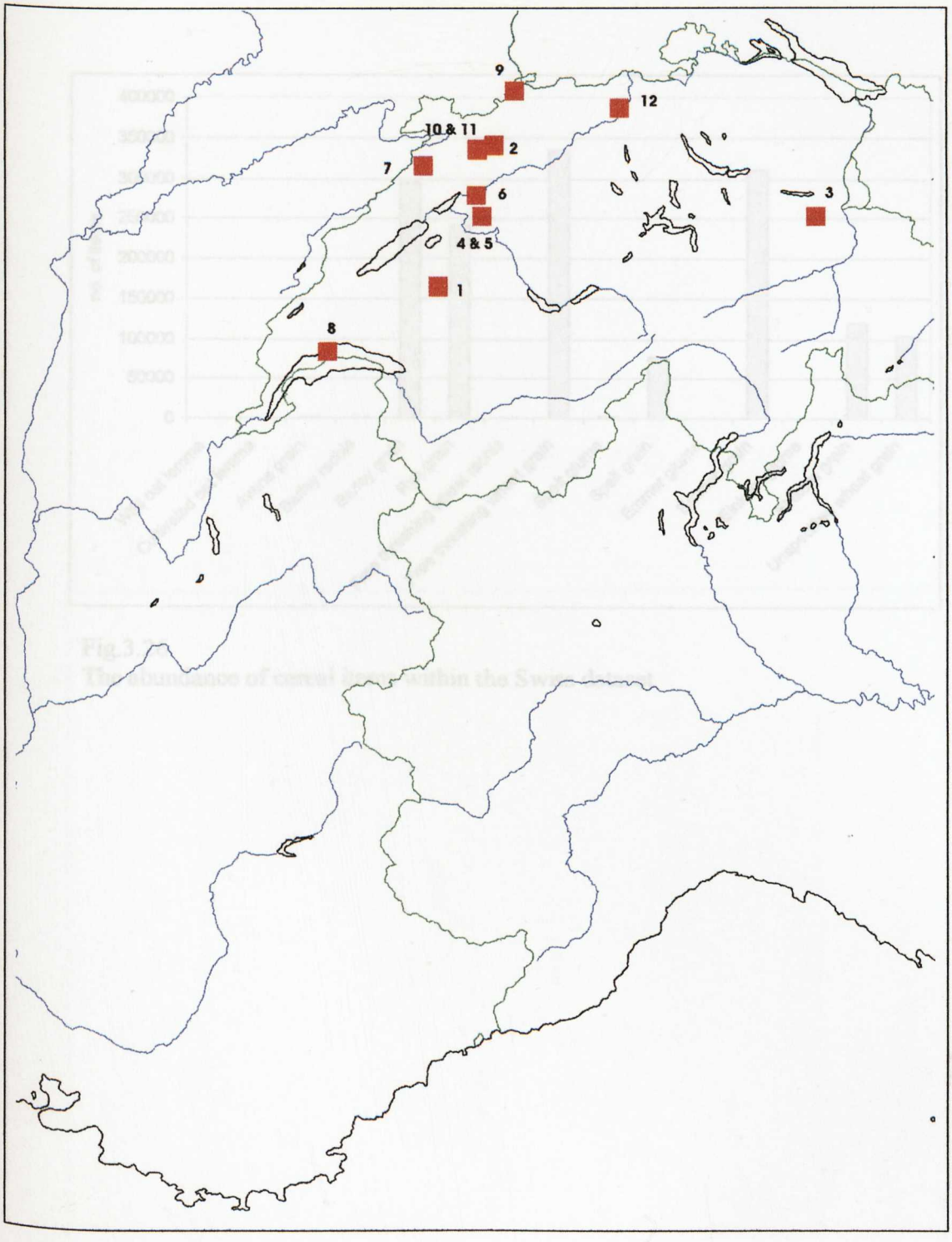


Fig. 3.25
Map of sites included in the Swiss dataset.
1.Arconciel - pre de L'arche (ARC), 2.Augst (AUG), 3.Balzers Amthaus (BAL), 4.Basel (BRG), 5.Basel-Gasfabrik (BGF), 6.Biberist, 7.Chevenez (CHEEV), 8.Cheyres (CES), 9.Kaiseraugst (KSM & KAT), 10.Reinach (BLRM),11. Therwil (THW), 12.Vindonissa (V & VBR)

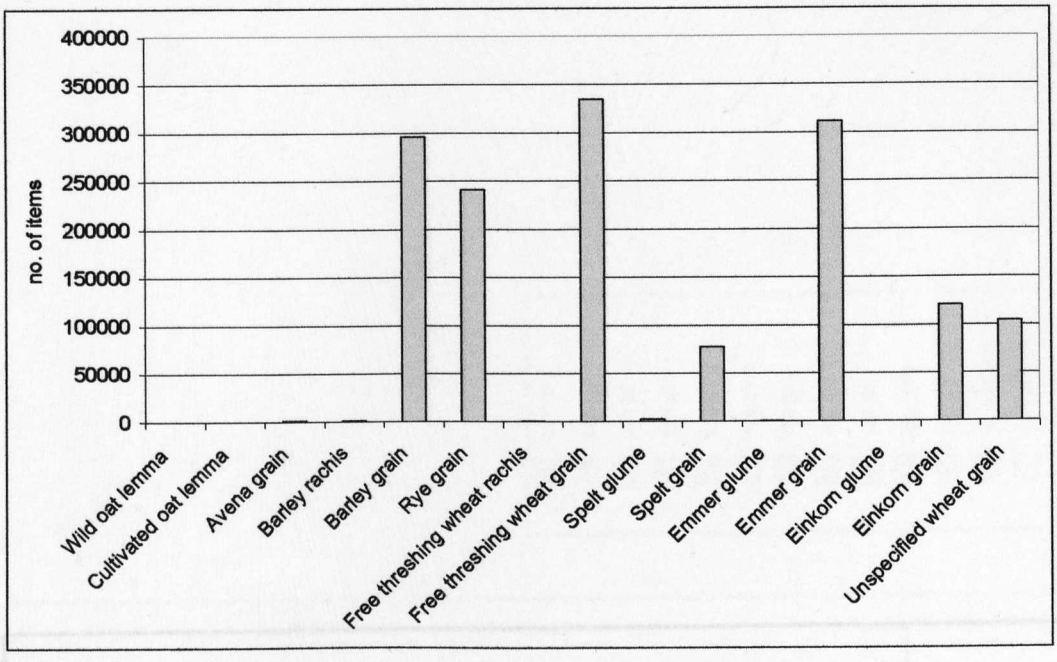


Fig.3.26
The abundance of cereal items within the Swiss dataset.

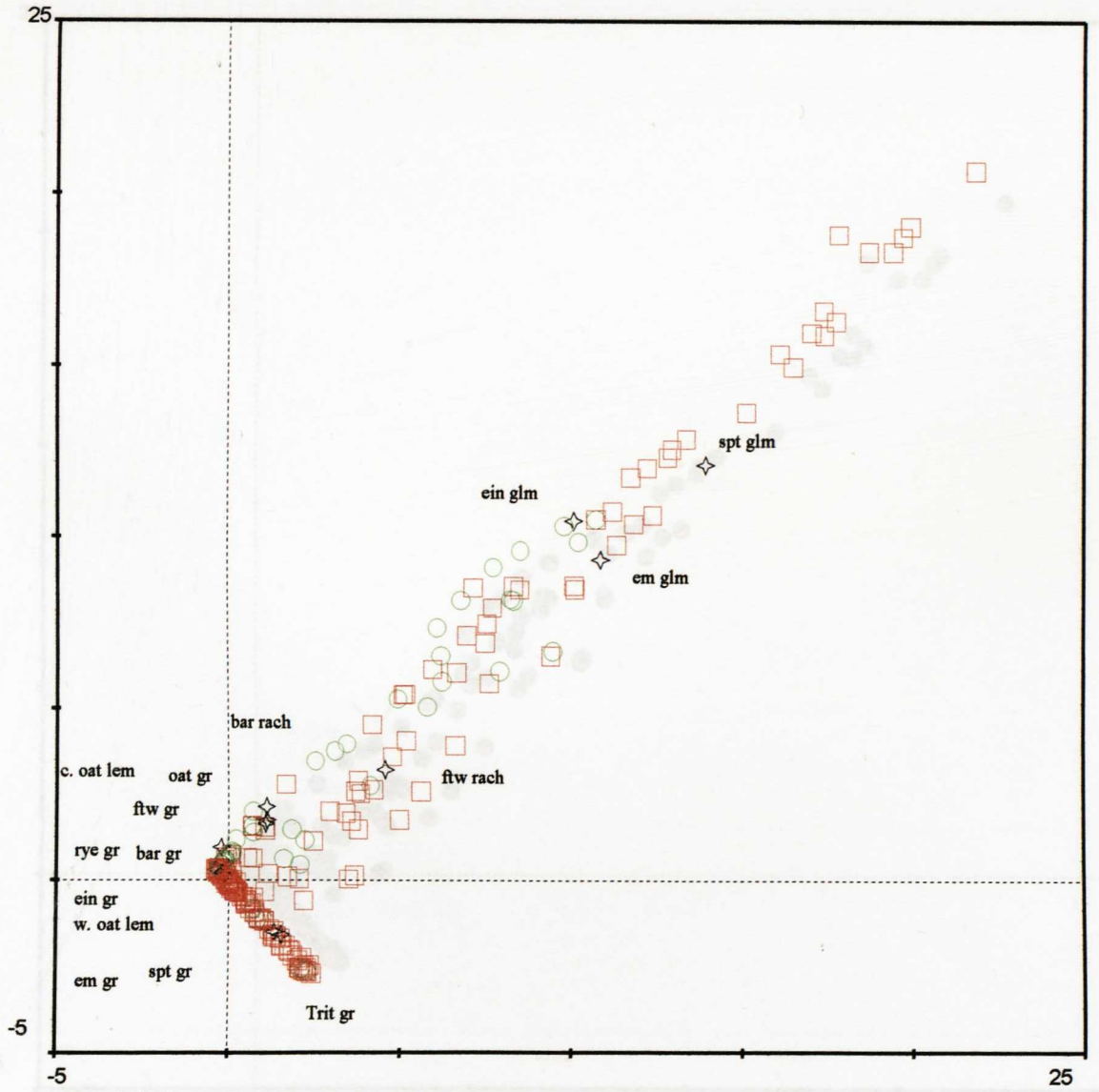


Fig. 3.27

Correspondence analysis plot of all taxa/plant parts in the Swiss samples (coded by period).

(a) Plot of taxa/plant parts and samples. Red squares=Roman; green circles=Iron Age; stars=items. Mixed period samples left blank.

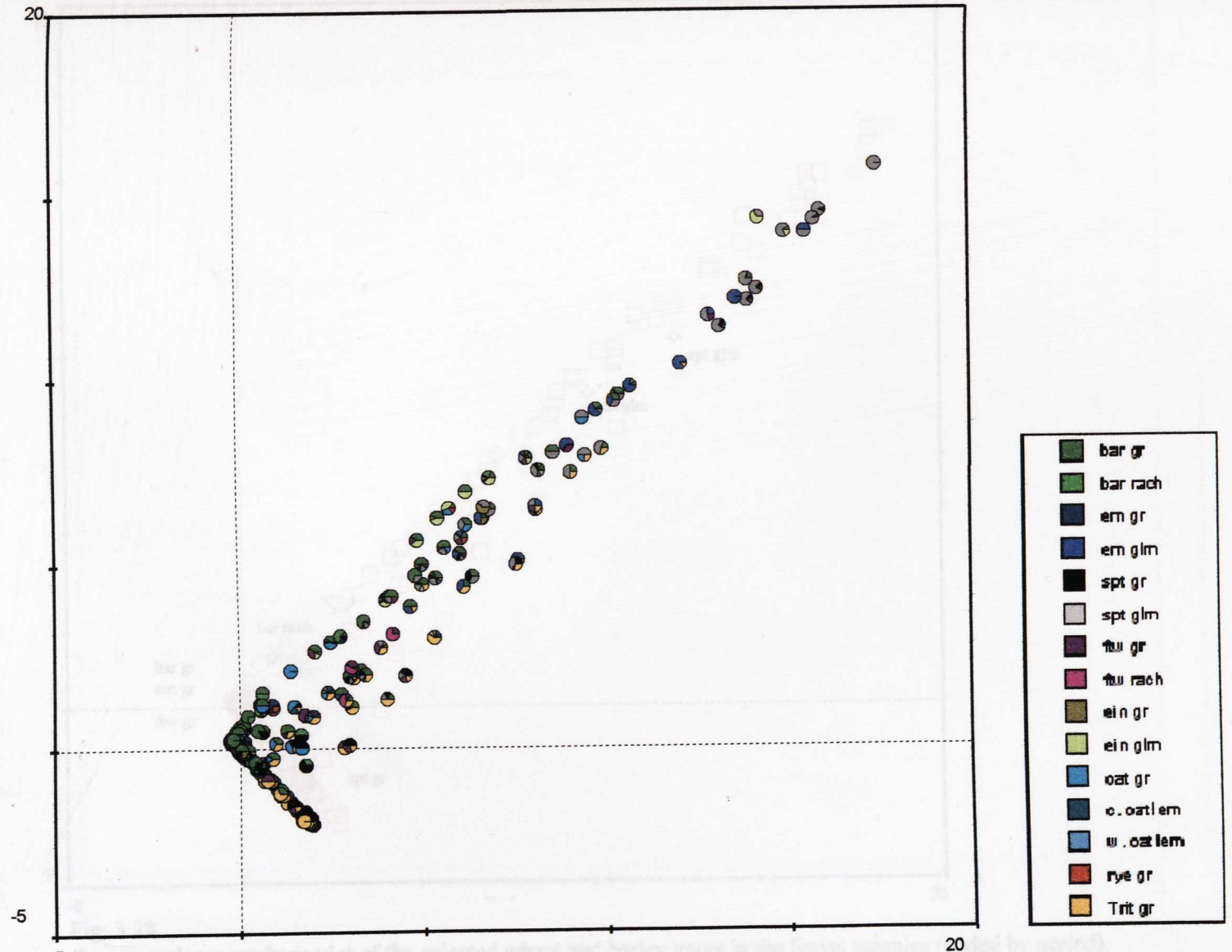


Fig. 3.27 (continued)
(b) Plot of samples showing the relative proportions of all items (all samples).

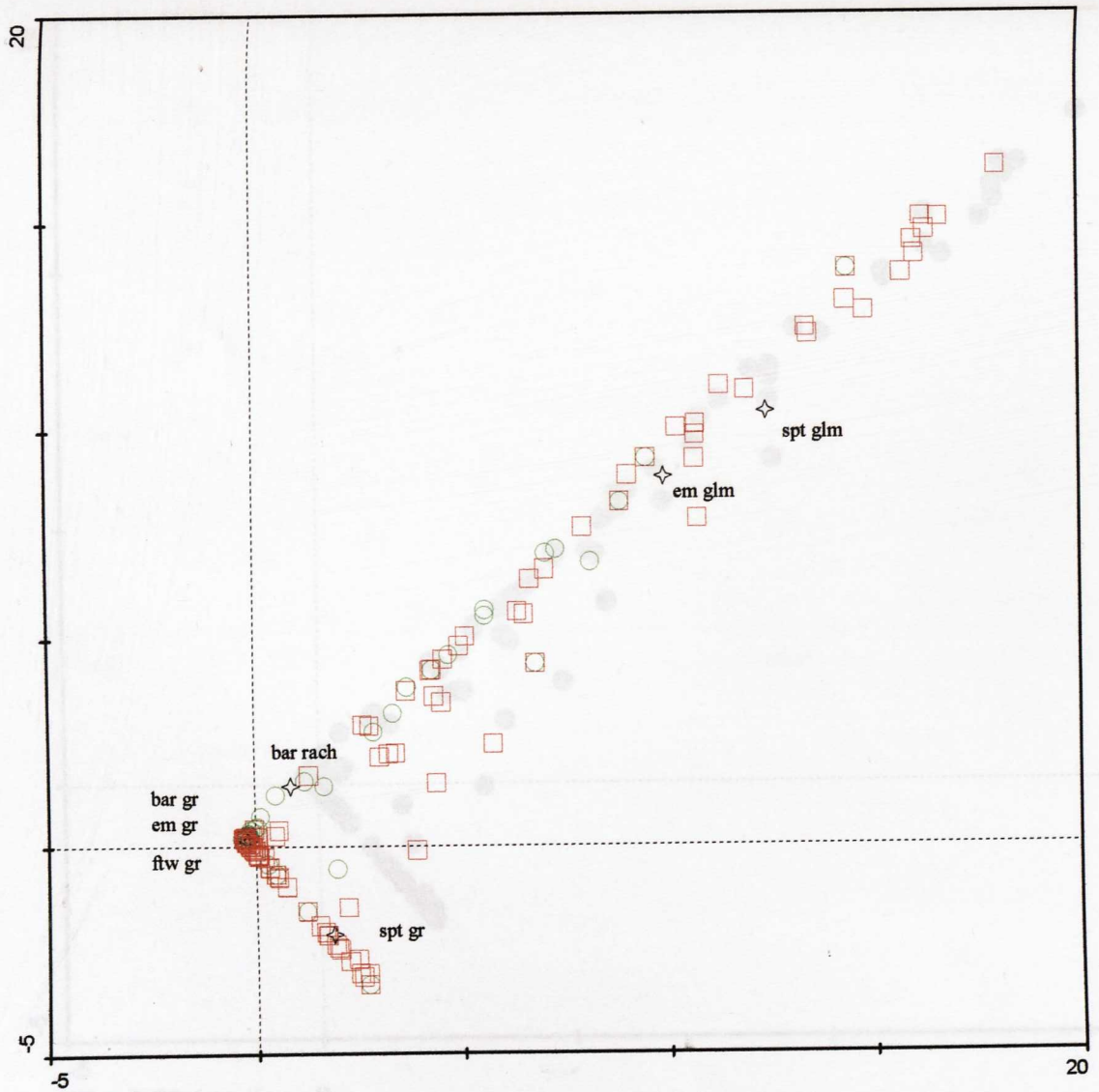


Fig. 3.28
Correspondence analysis plot of the selected wheat and barley items in the Swiss samples (coded by period).
(a) Plot of taxa/plant parts and samples. Red squares=Roman; green circles =Iron Age; stars=items. Mixed period samples left blank.

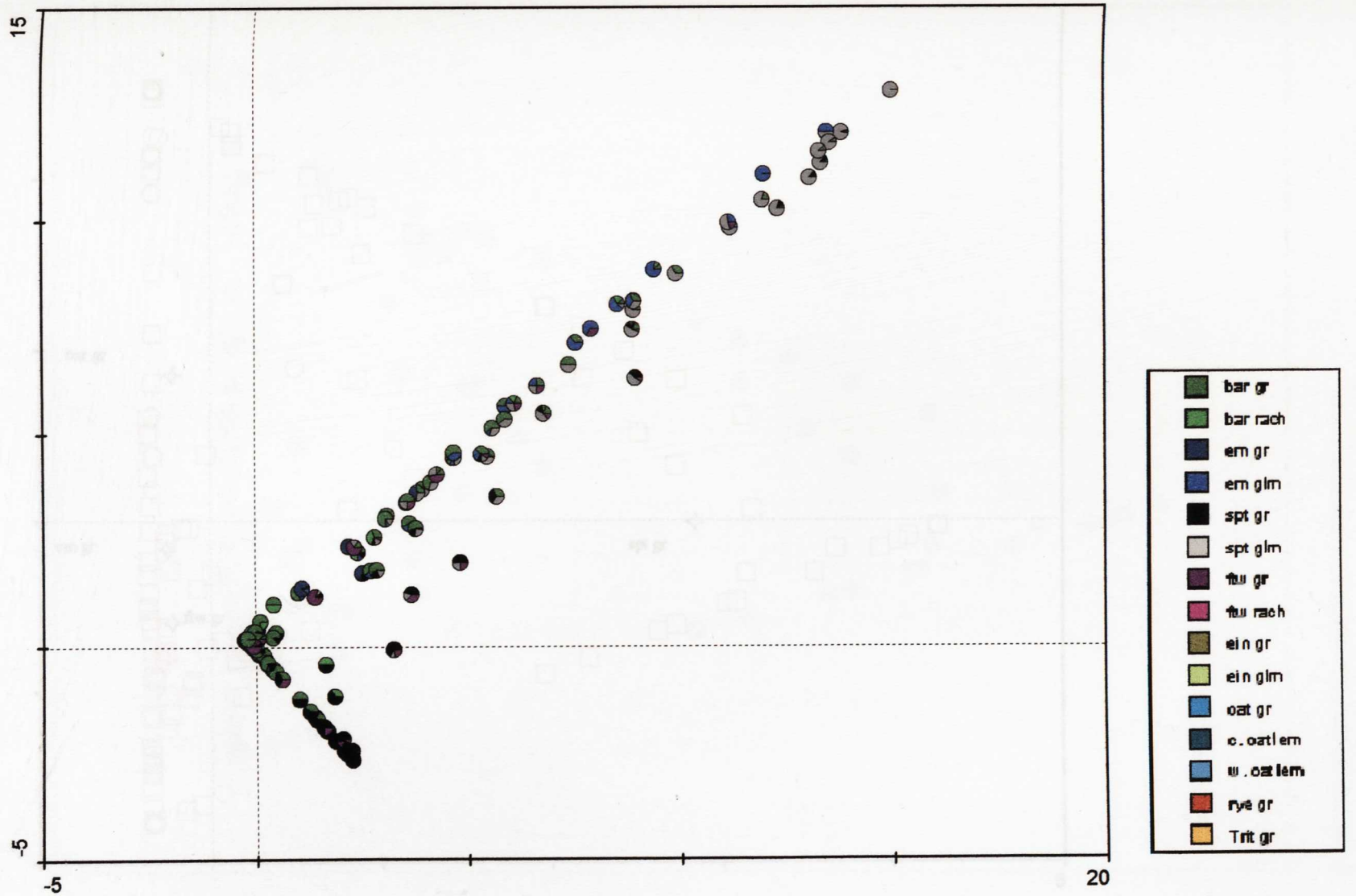


Fig. 3.28 (continued)
(b) Plot of samples showing the relative proportions of the selected wheat and barley items (all samples).

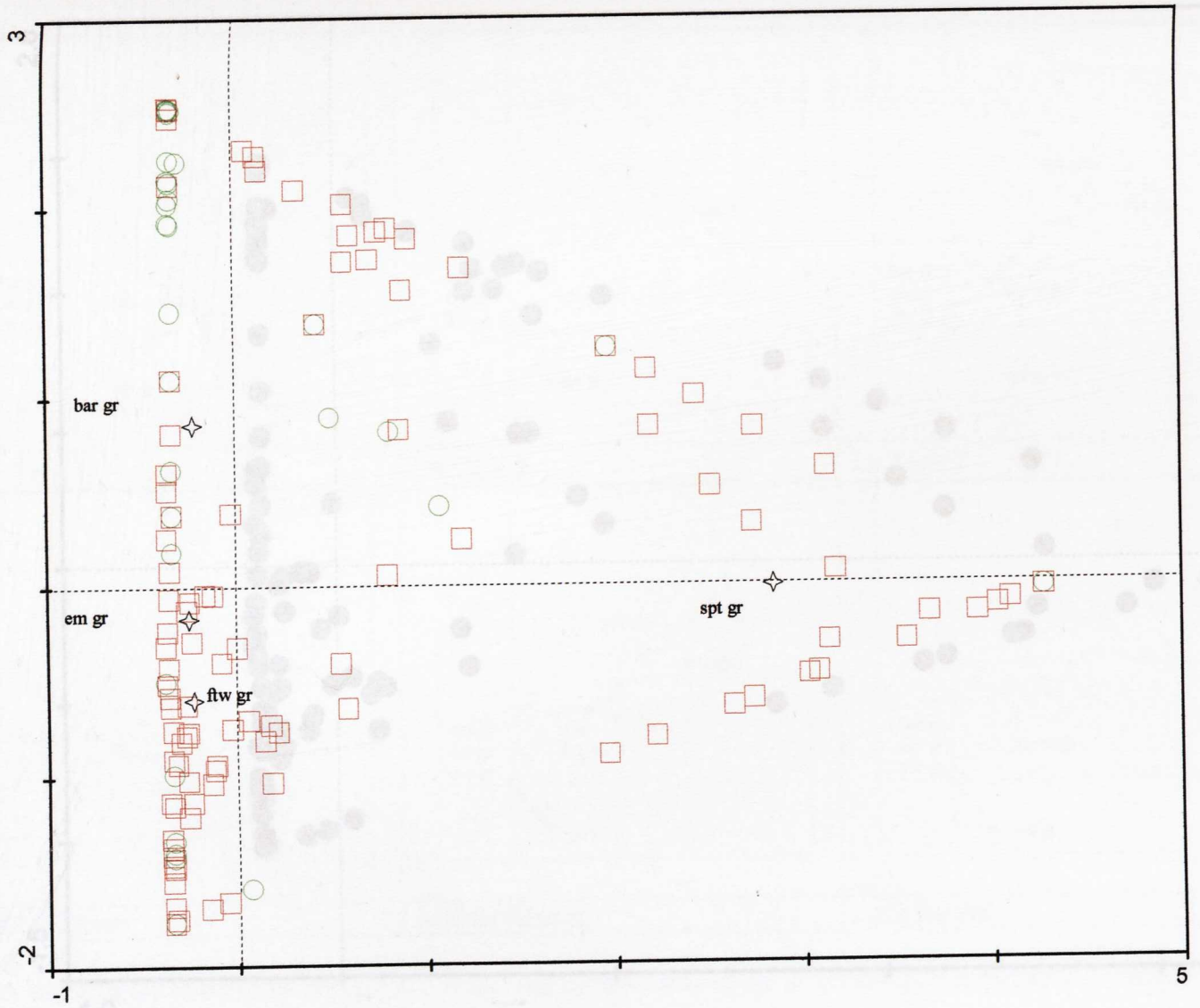


Fig. 3.29
(a) Correspondence analysis plot of the selected wheat and barley grain items in the Swiss samples (coded by period).
Plot of taxa/plant parts and samples. Red squares=Roman; green circles =Iron Age; stars=items. Mixed period samples left blank.

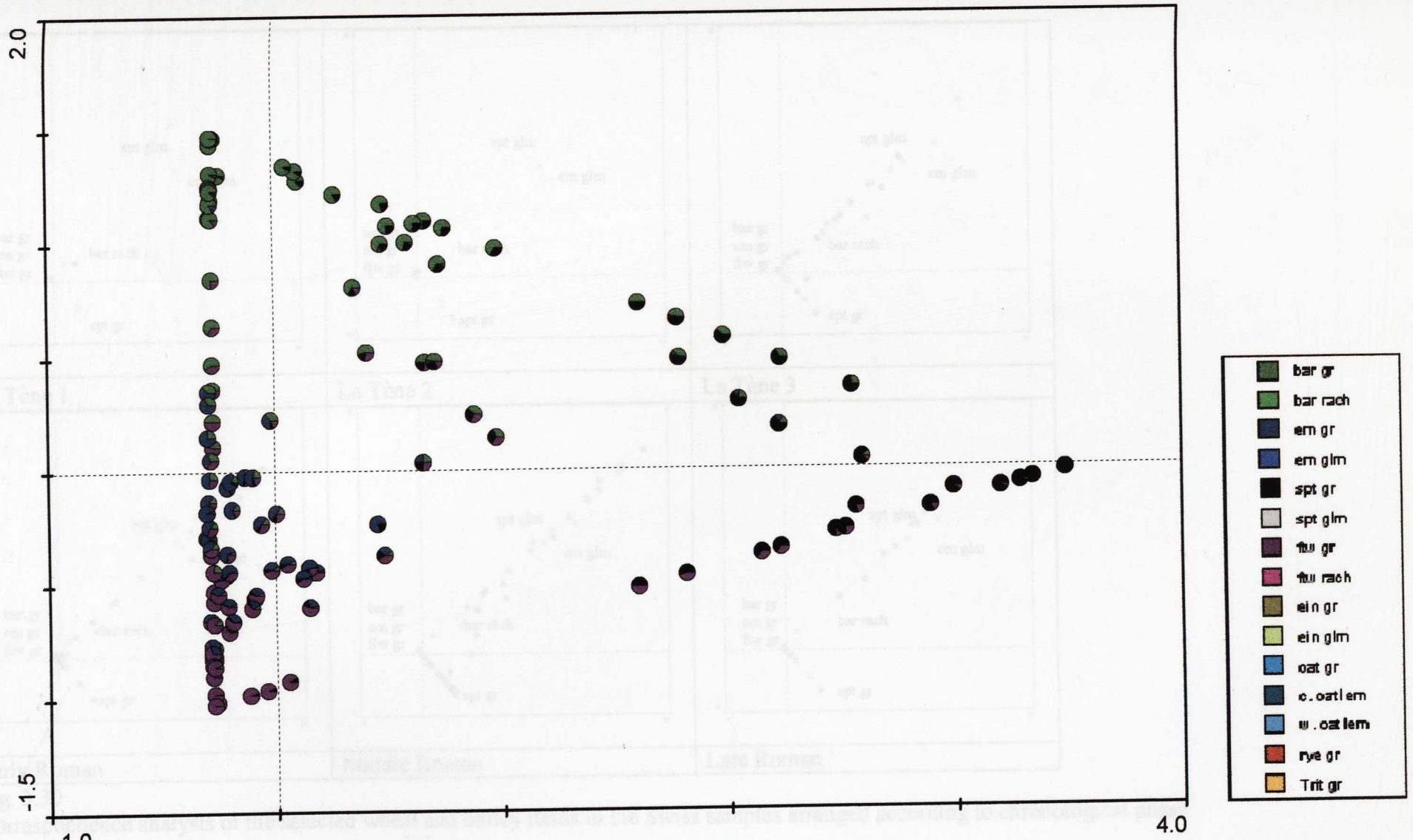


Fig. 3.29 (continued)
(b) Plot of samples showing the relative proportions of the selected wheat and barley grain items (all samples).

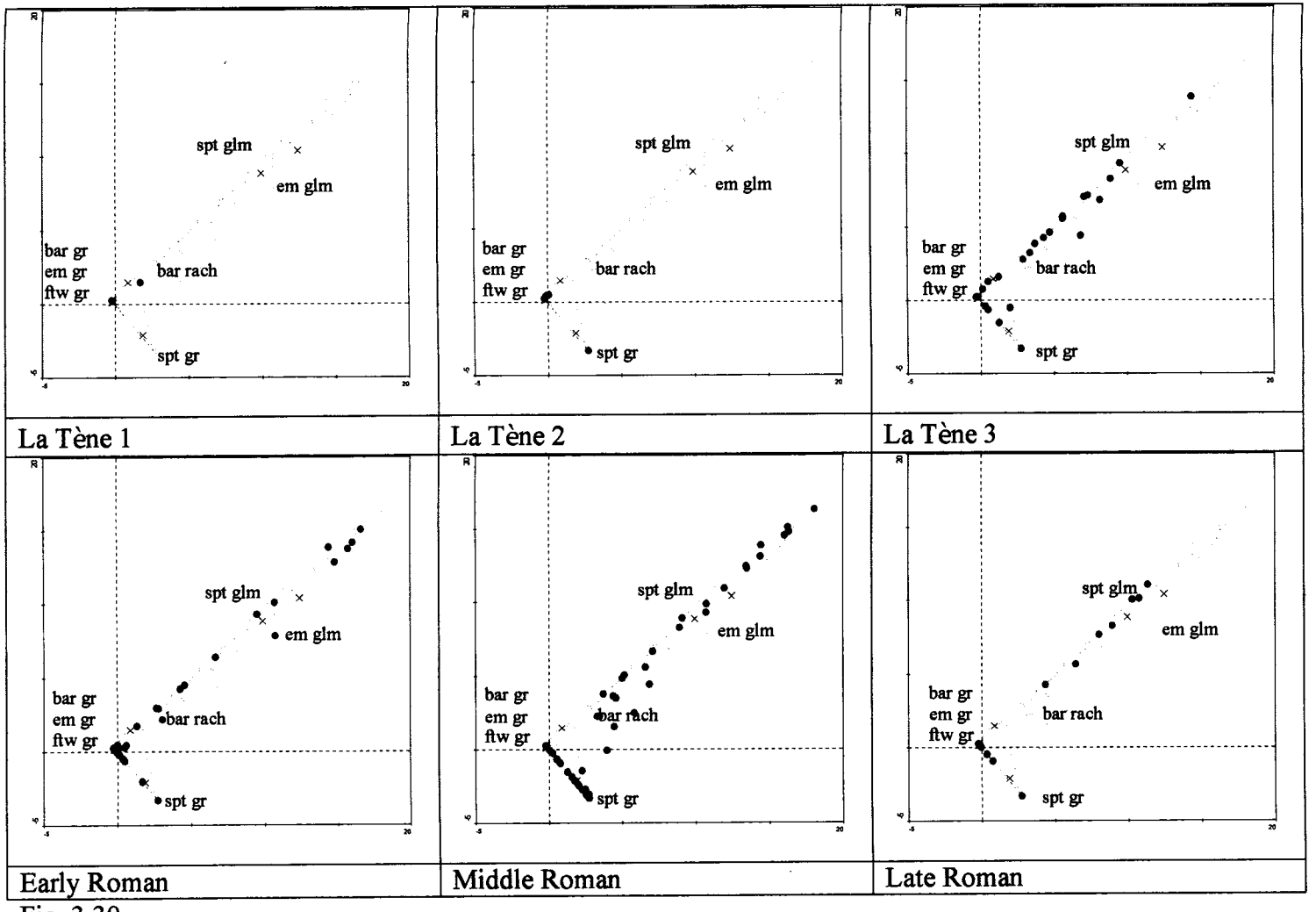


Fig. 3.30
Correspondence analysis of the selected wheat and barley items in the Swiss samples arranged according to chronological phase.

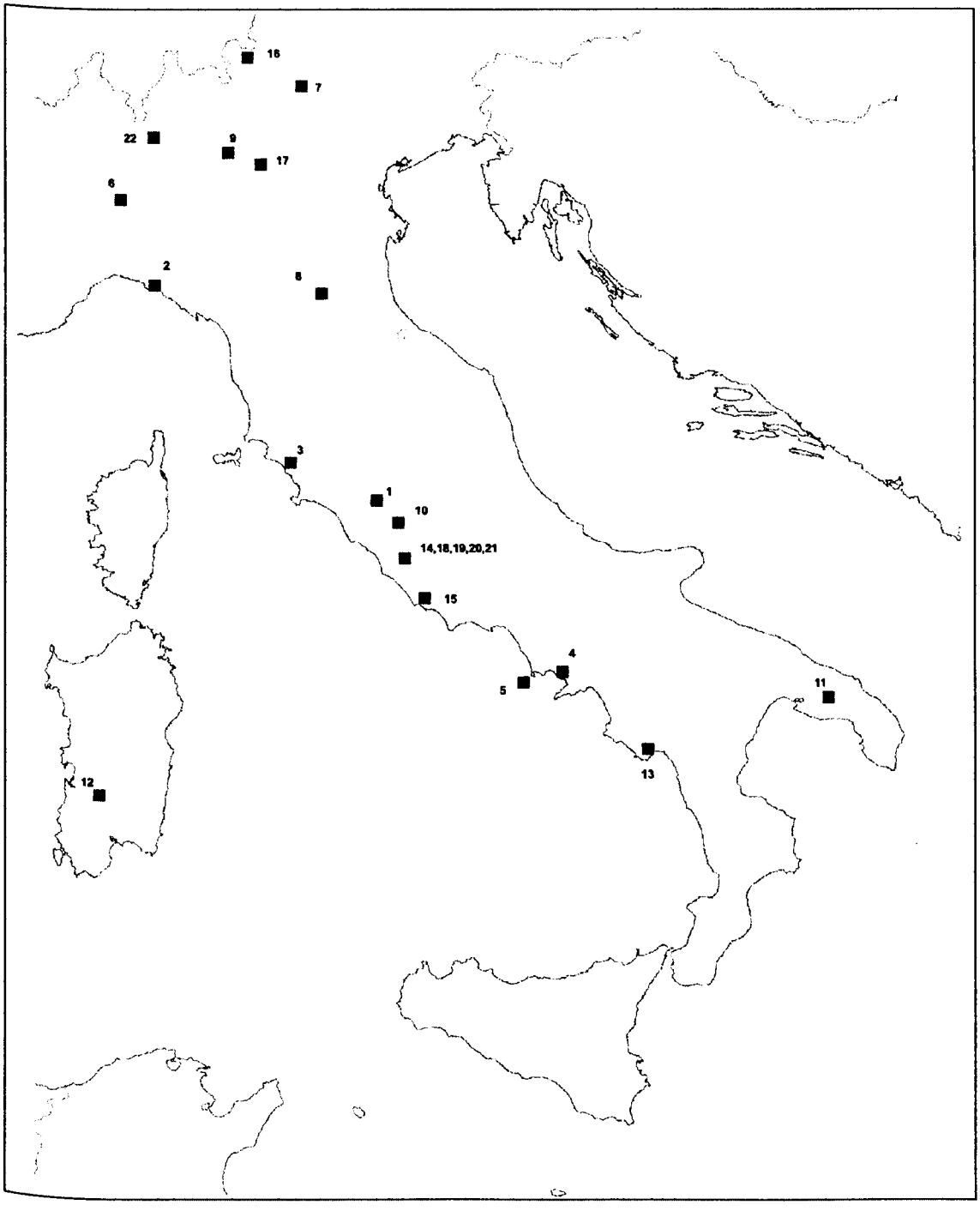


Fig. 3.31
Map of sites included in the Italian dataset.
1.Acquarossa, 2.Castellaro di Uscio, 3.Filattiera-Sorano, 4.House 11and 12 (Amarantus-Pompeii), 5.Ischia, 6.Lomello, 7.Mezzocorona, 8.Monte Bibele, 9.Narce, 10.Nave, 11.Oria, 12.Ortu Comidu, 13.Roccagloiosa 1, 14.Setore 9 area 4 and 5 (Rome), 15.Satrianum, 16 Schluderns, 17.Sirmione Via Antiche 11, 18.St Omobono, 19.Tombs Via Sacra (Rome), 20. Via Sacra Archaic (Rome), 21.Via Sacra Atrium Vestae (Rome), 22.Via T Grossi (Mariano Comense)

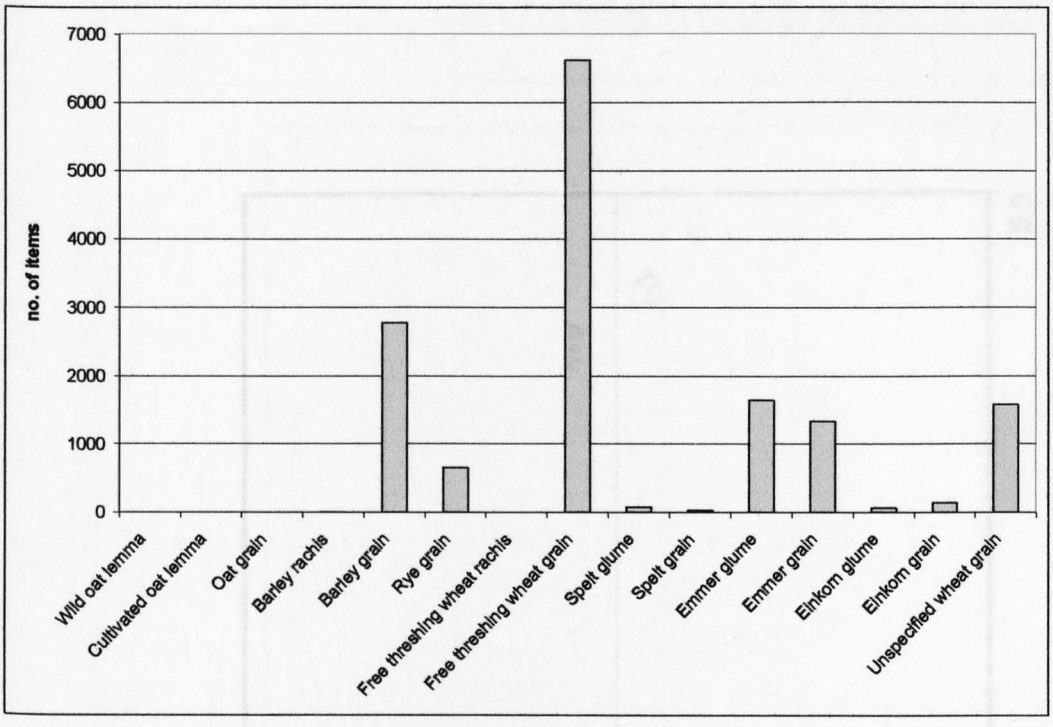


Fig. 3.32
The abundance of cereal items within the Italian dataset.

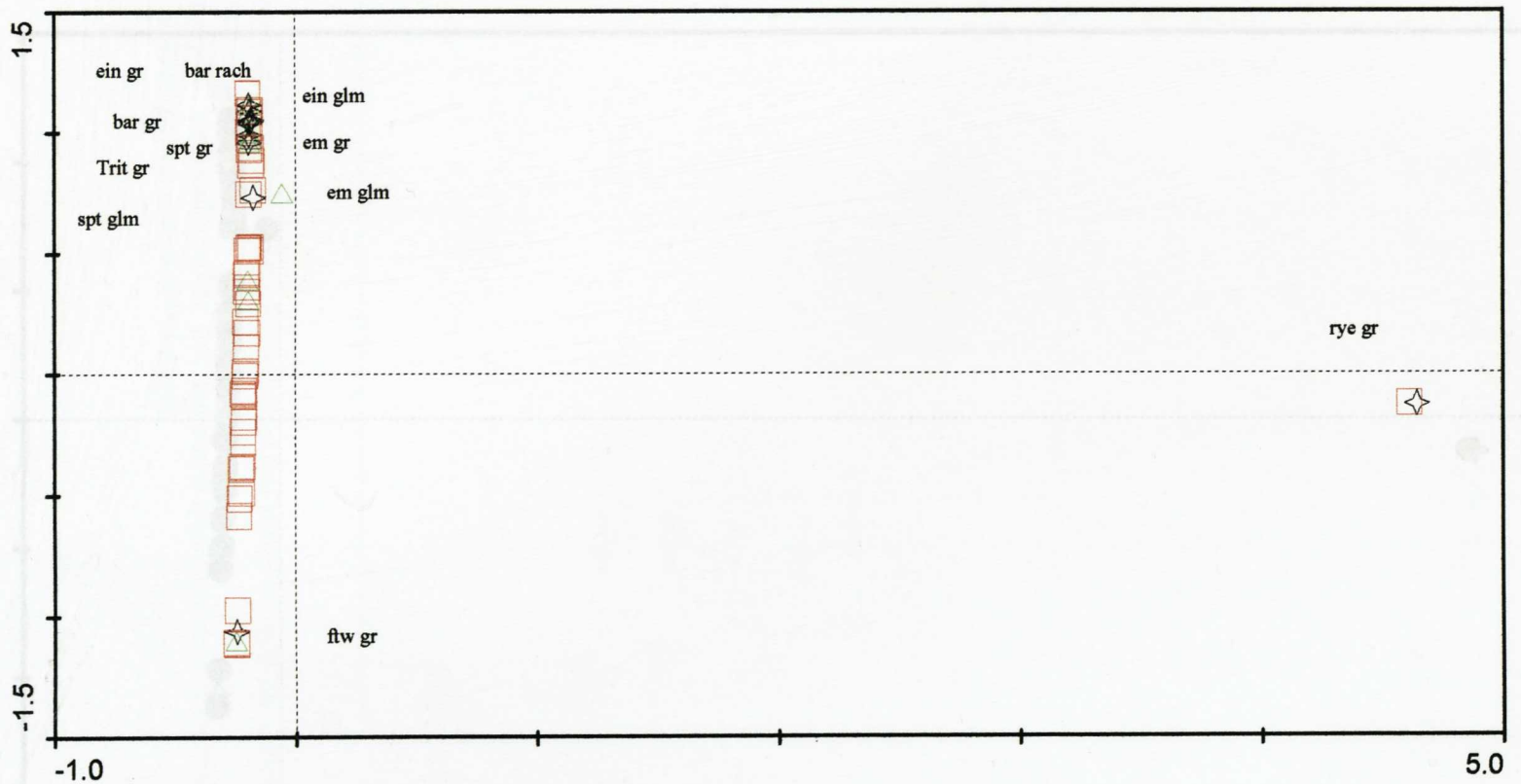


Fig. 3.33
Correspondence analysis plot of all taxa/plant parts in the Italian samples (coded by period).
(a) Plot of taxa/plant parts and samples. Red squares=Roman; green circles =Iron Age; stars=items. Mixed period samples left blank.

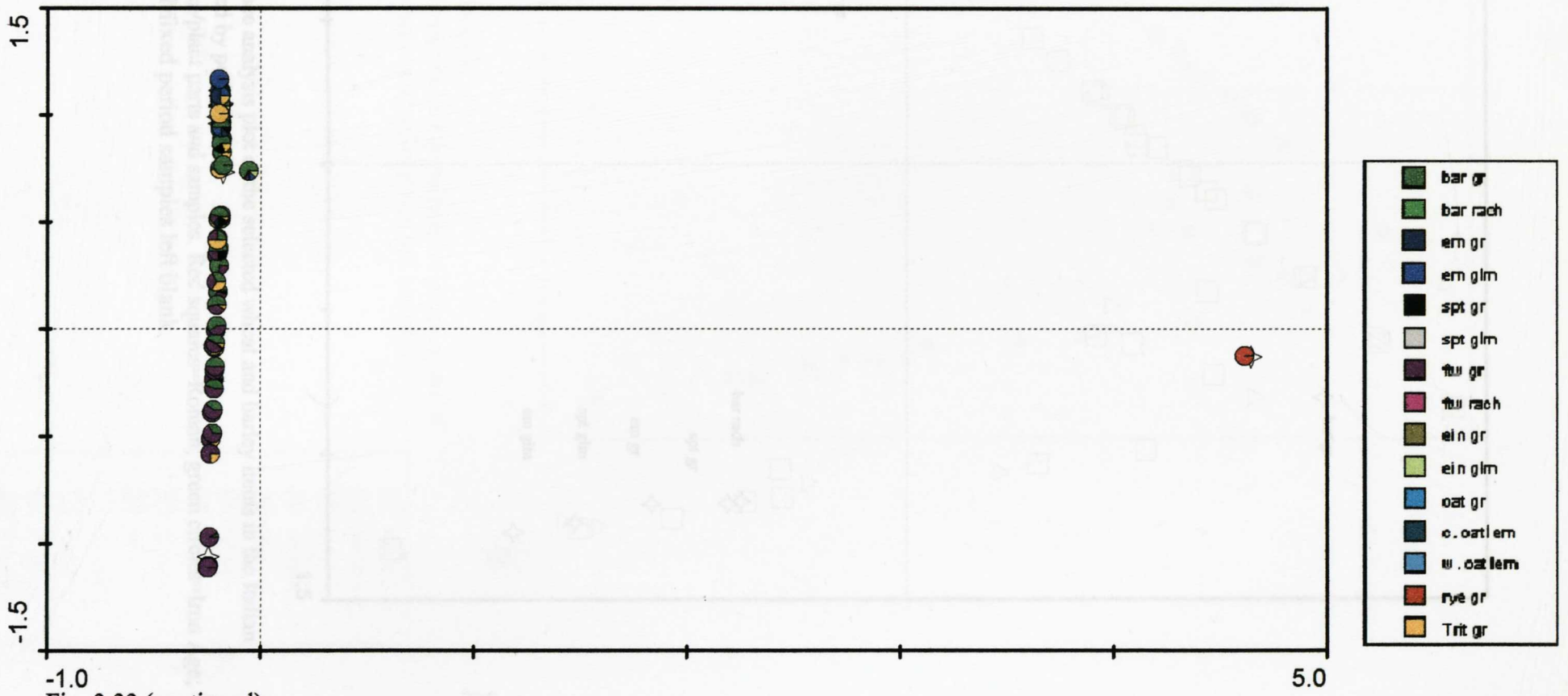


Fig. 3.33 (continued)
(b) Plot of samples showing the relative proportions of all items (all samples).

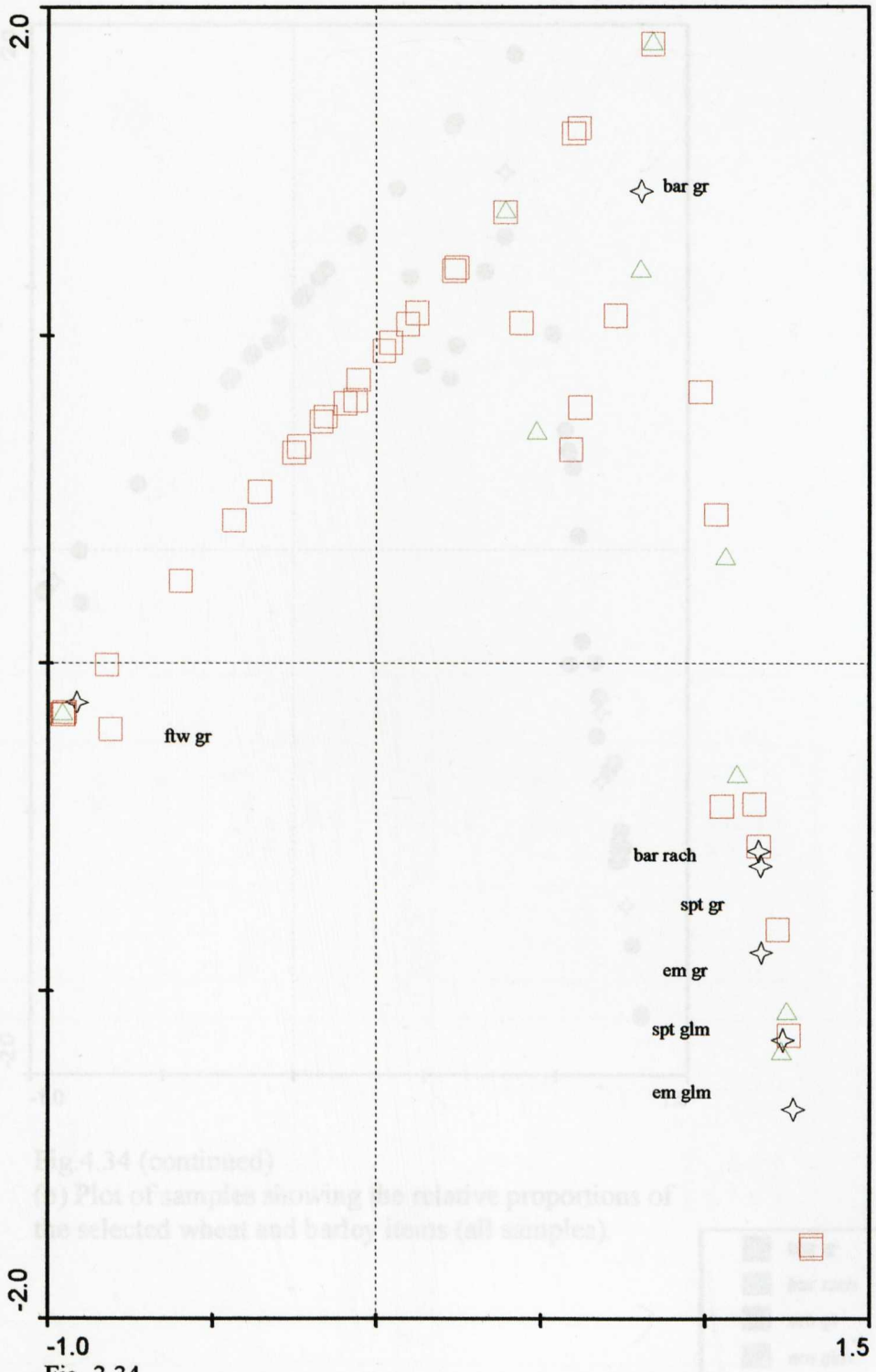


Fig. 3.34

Correspondence analysis plot of the selected wheat and barley items in the Italian samples (coded by period).

(a) Plot of taxa/plant parts and samples. Red squares=Roman; green circles=Iron Age; stars=items. Mixed period samples left blank.

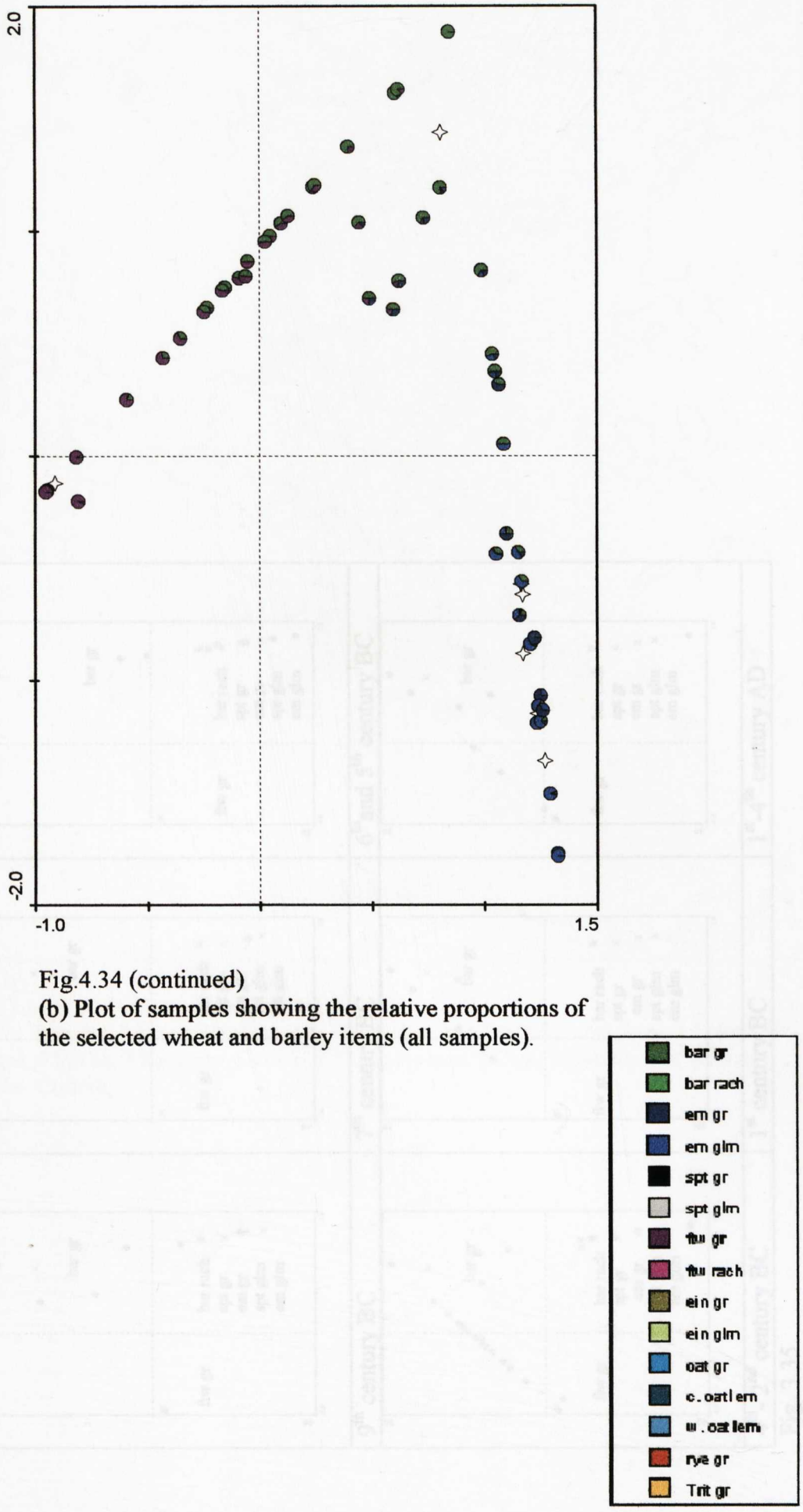


Fig.4.34 (continued)
(b) Plot of samples showing the relative proportions of the selected wheat and barley items (all samples).

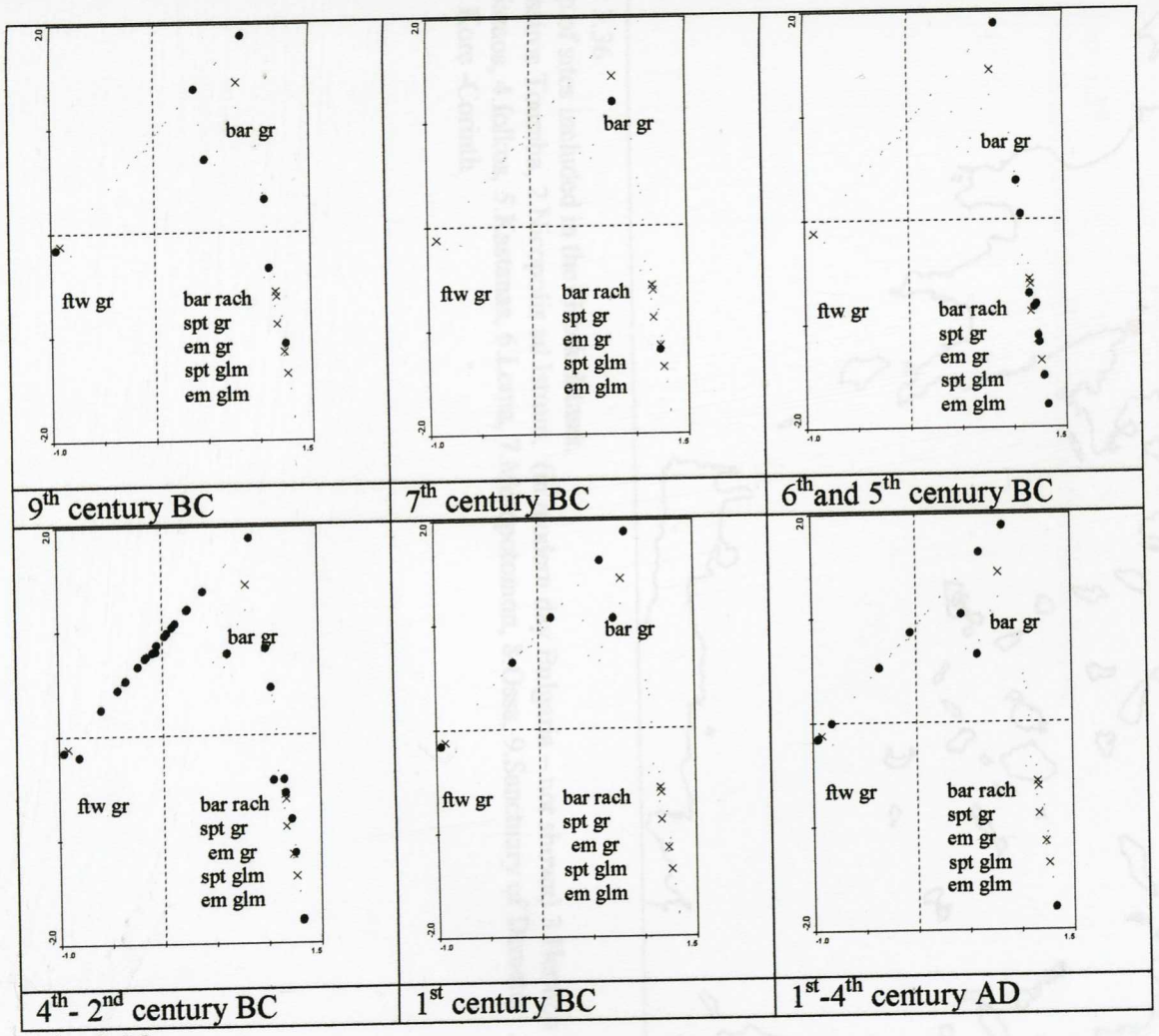


Fig. 3.35
Correspondence analysis of the selected wheat and barley items in the Italian samples arranged according to chronological phase.

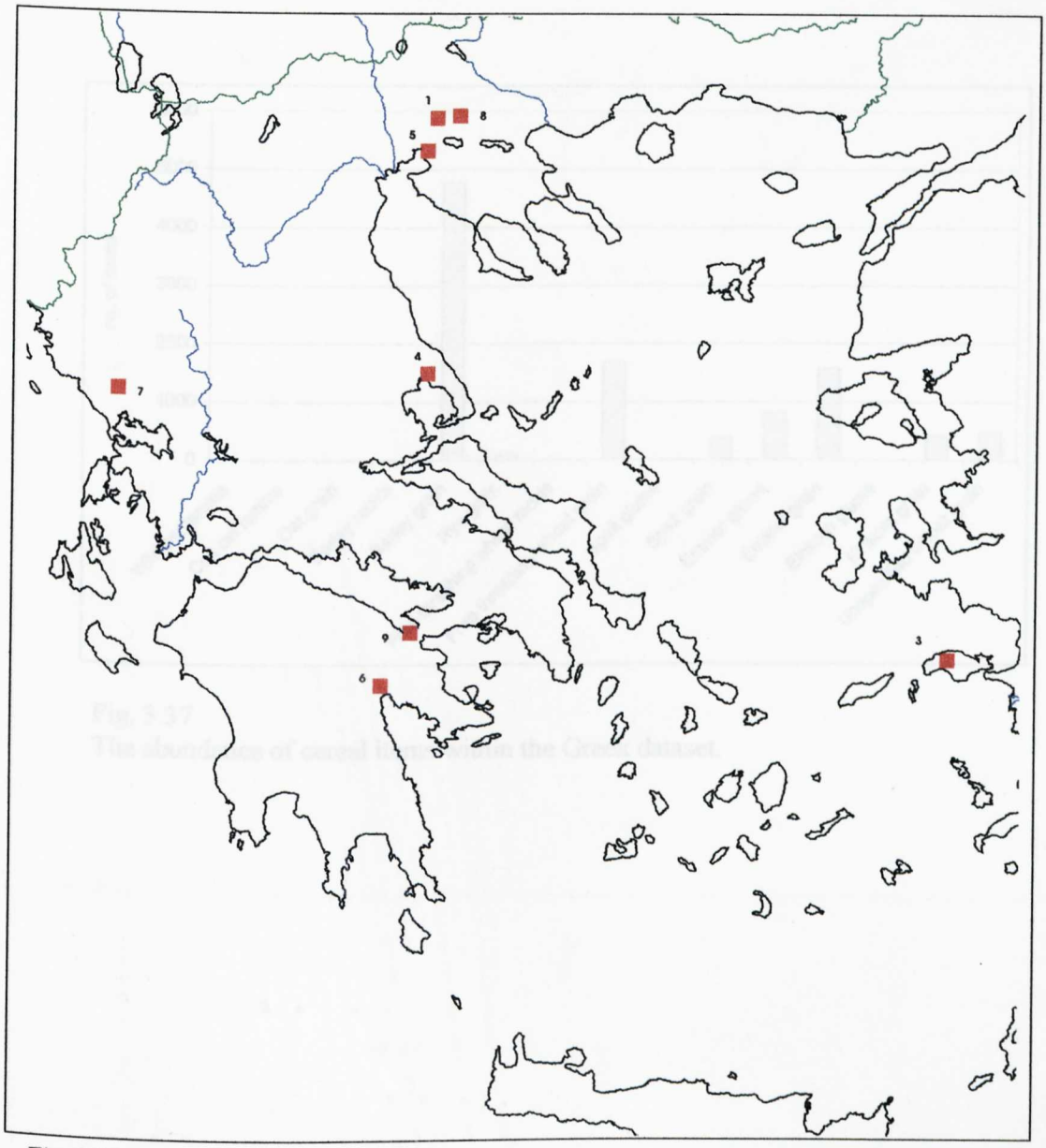


Fig. 3.36
Map of sites included in the Greek dataset.
1.Assiros Toumba, 2.Nicopolis ad Istrum, (in modern day Bulgaria – not shown) 3.Heraion of Samos, 4.Iolkos, 5.Kastanas, 6.Lerna, 7.Mesopotomon, 8.Ossa, 9.Sanctuary of Demeter and Kore -Corinth

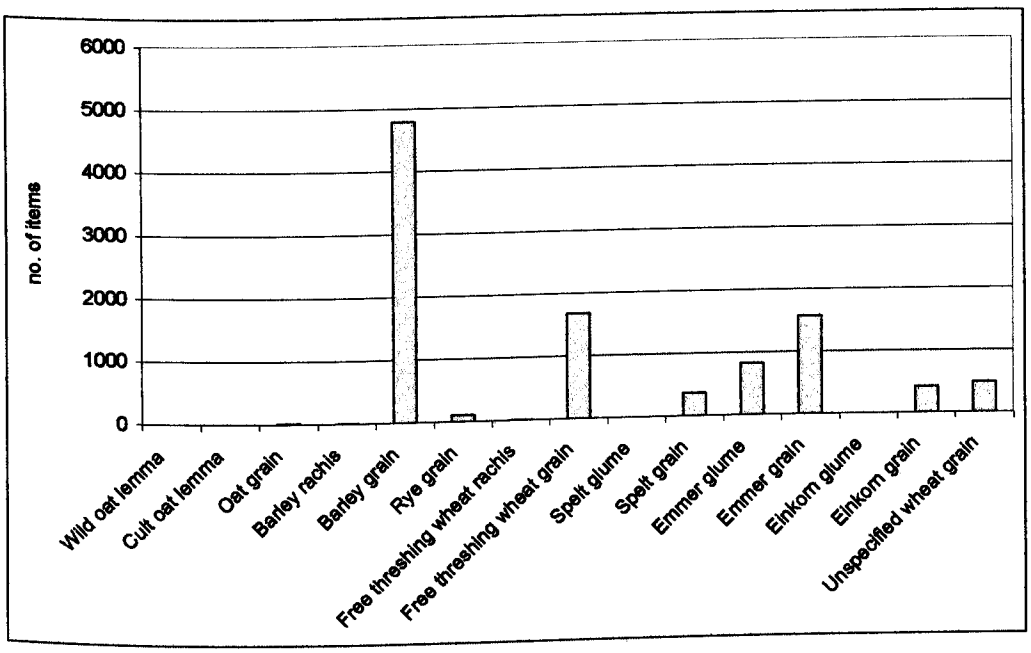


Fig. 3.37
The abundance of cereal items within the Greek dataset.

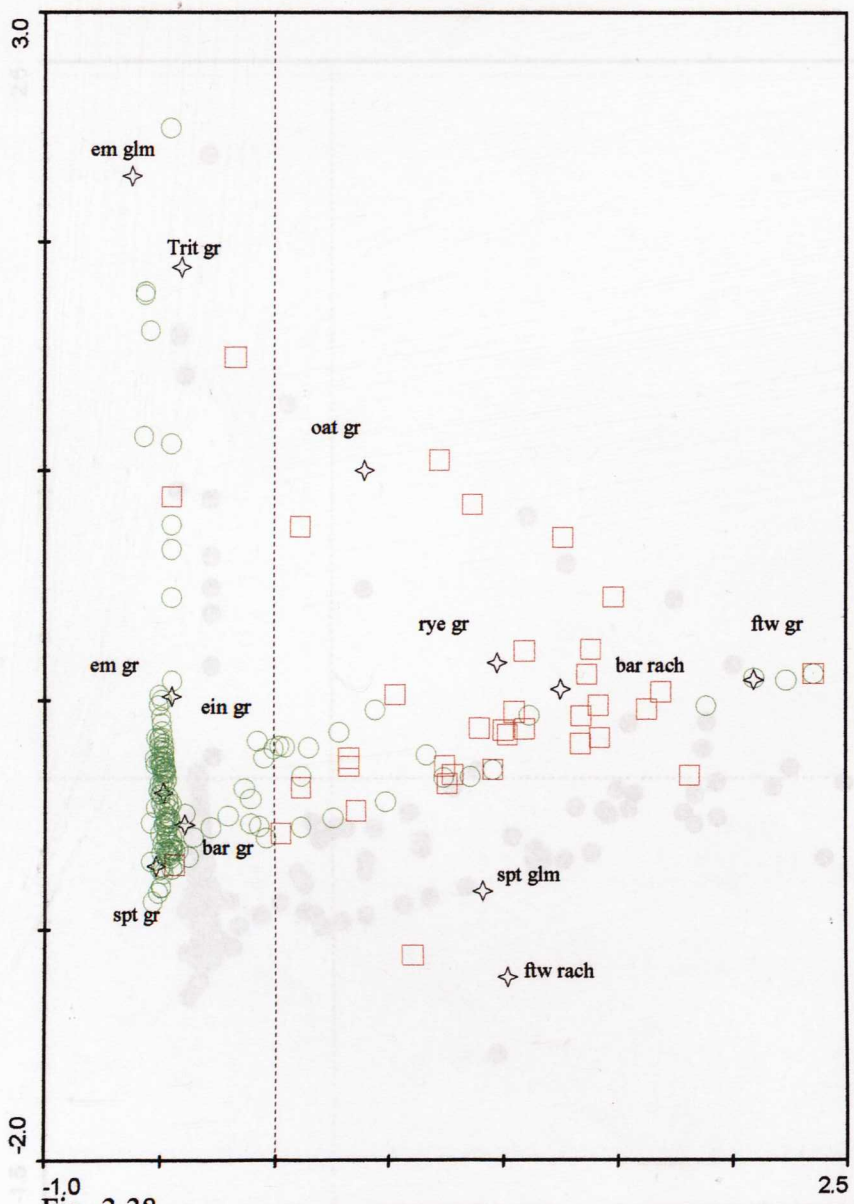


Fig. 3.38

Correspondence analysis plot of all taxa/plant parts in the Greek samples (coded by period).

(a) Plot of taxa/plant parts and samples. Red squares=Roman; green circles =Iron Age; stars=items. Mixed period samples left blank.

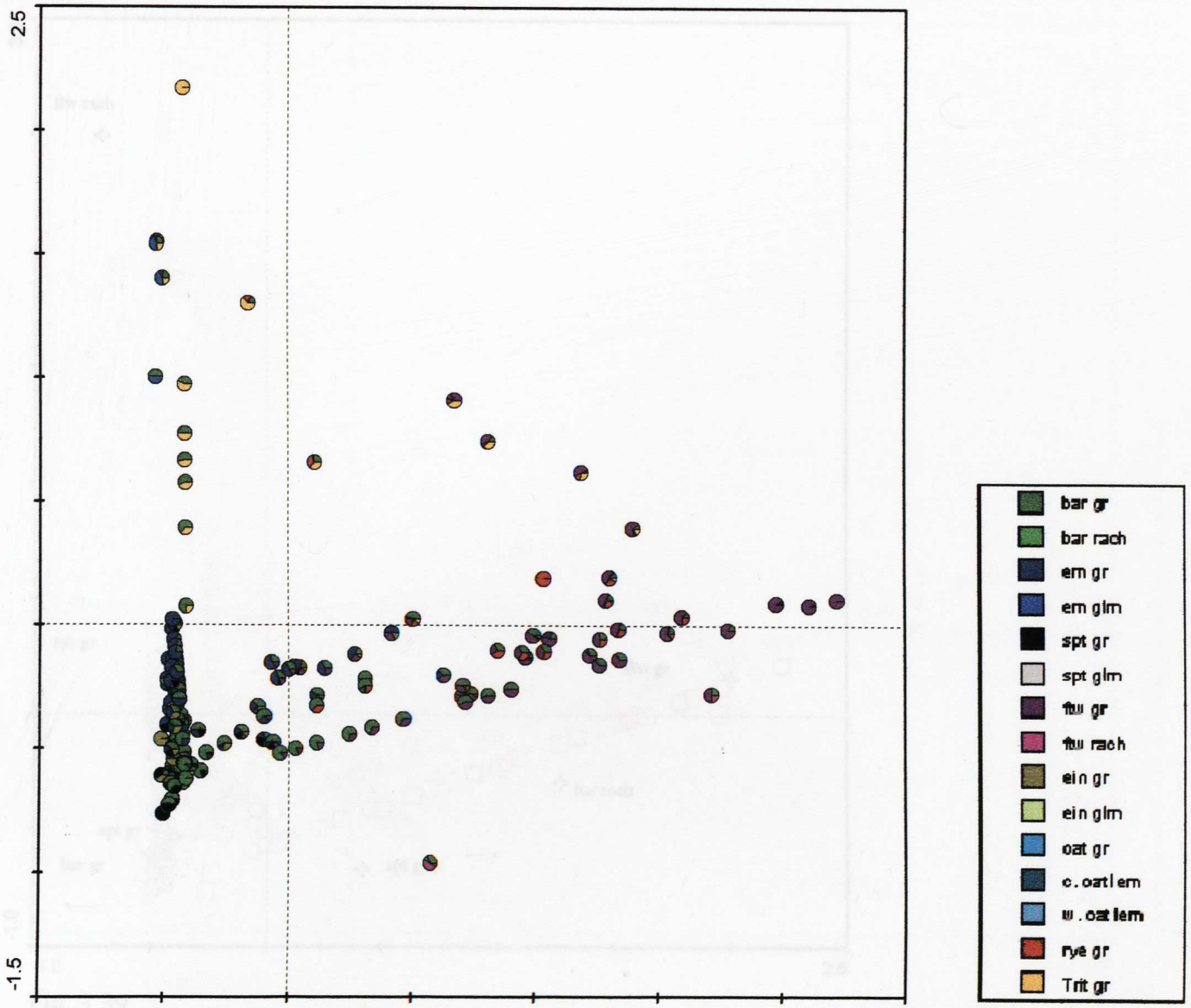


Fig. 3.38 (continued)
(b) Plot of samples showing the relative proportions of all items (all samples).

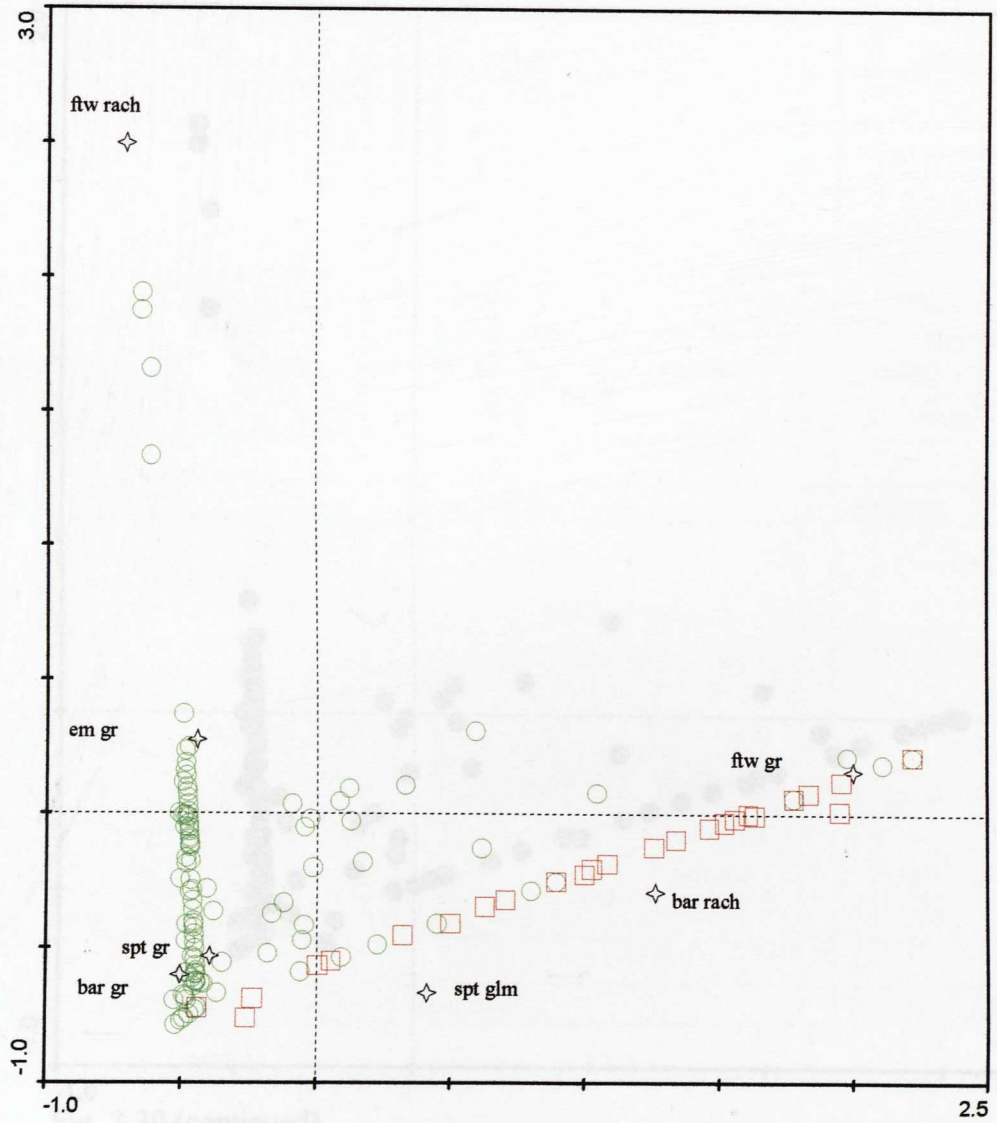


Fig. 3.39
Correspondence analysis plot of the selected wheat and barley items in the Greek samples (coded by period).
(a) Plot of taxa/plant parts and samples. Red squares=Roman; green circles =Iron Age; stars=items. Mixed period samples left blank.

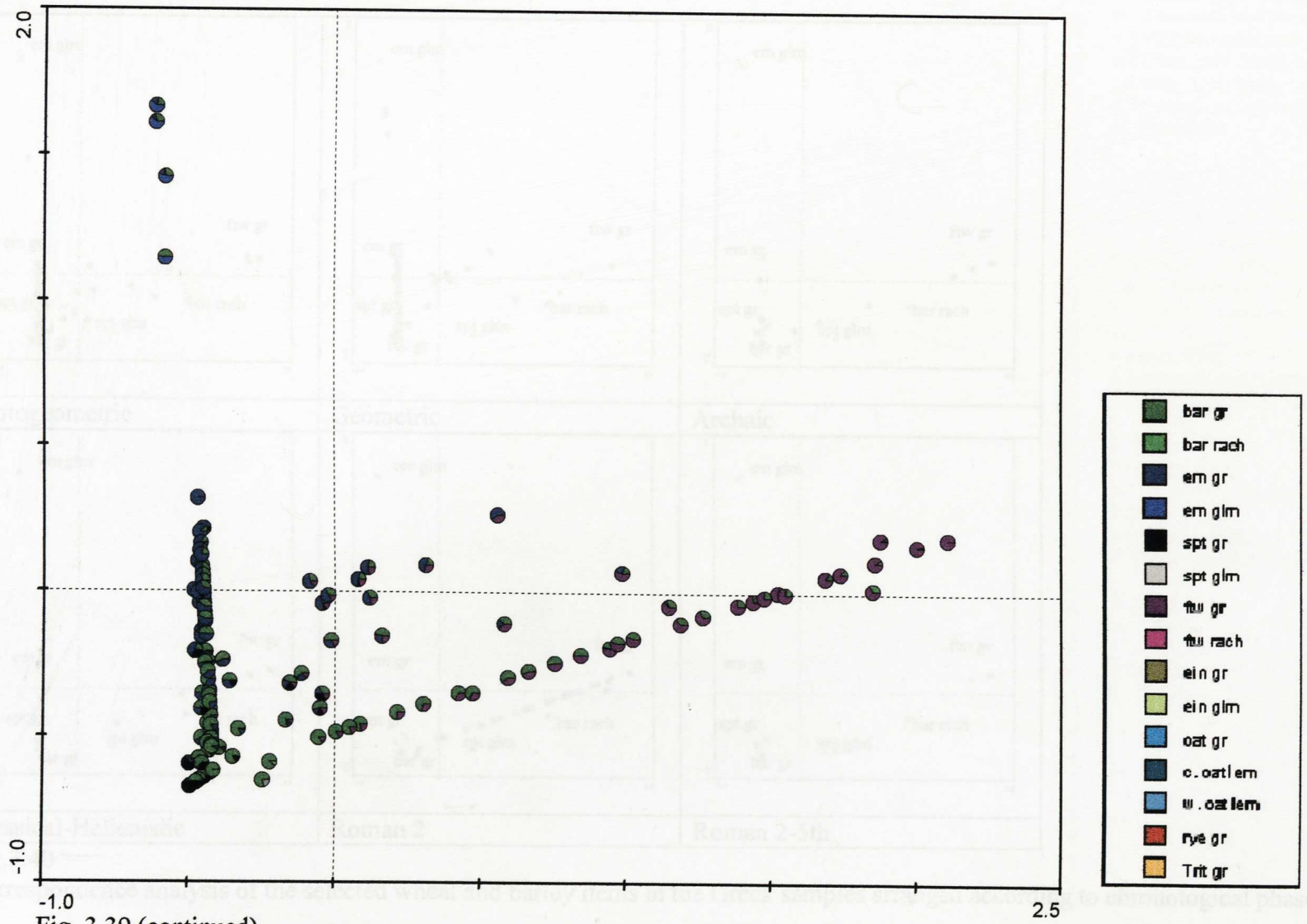


Fig. 3.39 (continued)

(b) Plot of samples showing the relative proportions of the selected wheat and barley items (all samples).

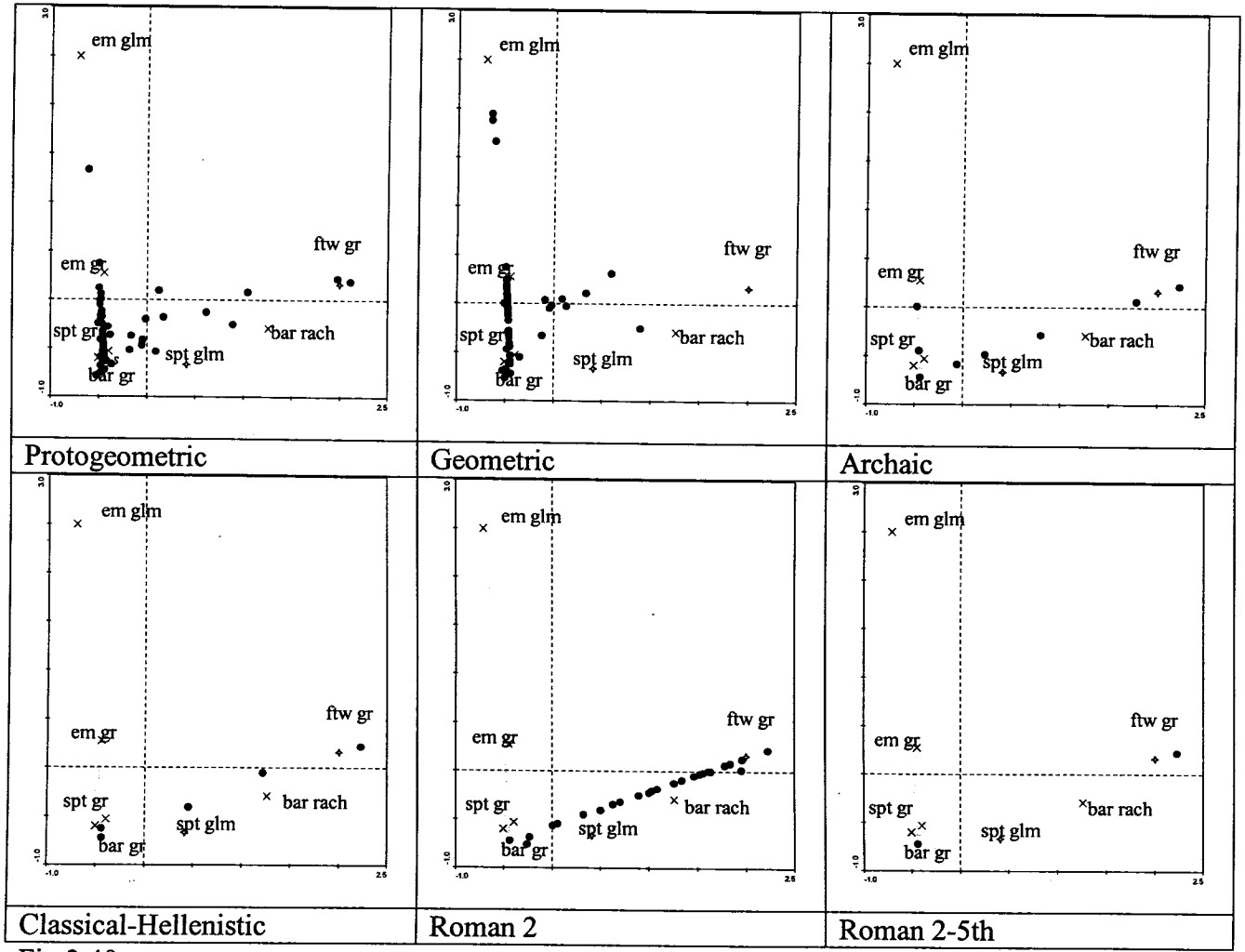
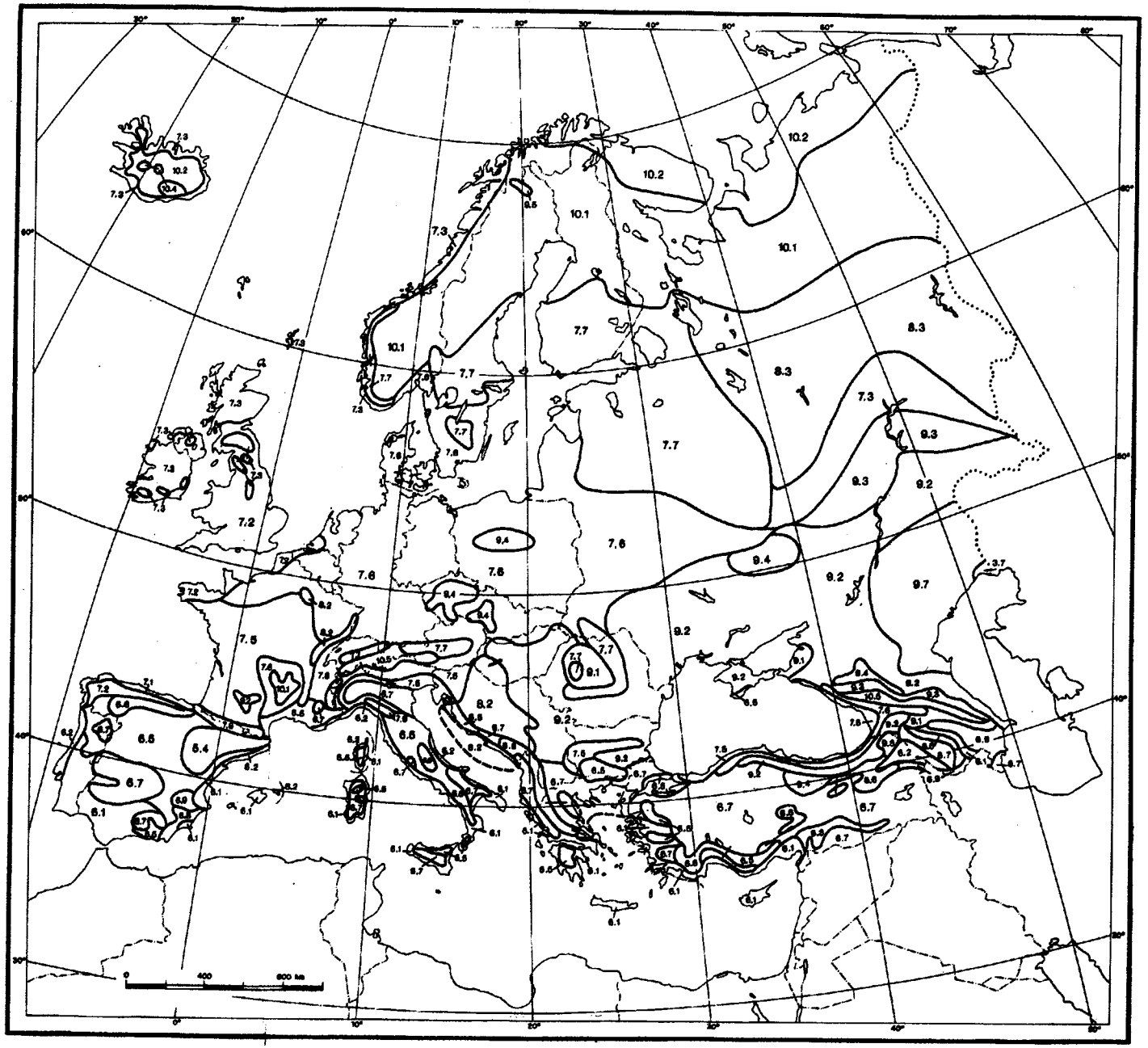


Fig.3.40

Correspondence analysis of the selected wheat and barley items in the Greek samples arranged according to chronological phase.



6. Mediterranean
6.1 Subtropical Mediterranean
6.2 Marine Mediterranean
6.5 Temperate Mediterranean
6.6 Cold Mediterranean
6.7 Continental Mediterranean
6.8 Semi Arid Subtropical Mediterranean
6.9 Continental and Semi-Arid Mediterranean

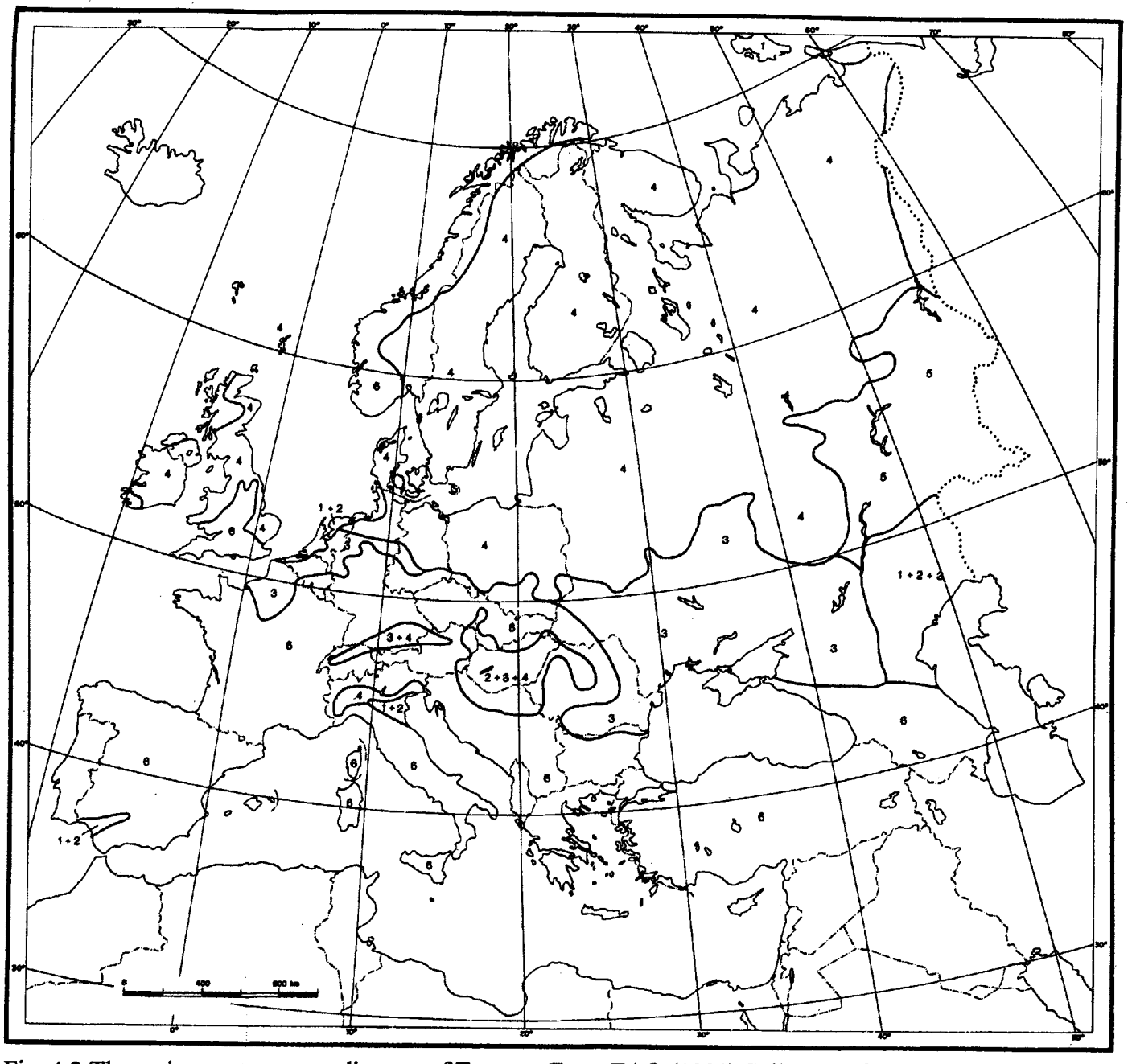
7. Marine
7.1 Warm Marine
7.2 Cool Marine
7.3 Cold Marine
7.5 Warm Temperate
7.6 Cool Temperate
7.7 Cold Temperate

8. Continental
8.2 Semi-Warm Continental
8.3 Cold Continental

9. Steppe
9.1 Warm Steppe
9.2 Semi-Warm Steppe
9.3 Cold Steppe
9.4 Temperate Steppe
9.7 Semi Arid Continental Steppe

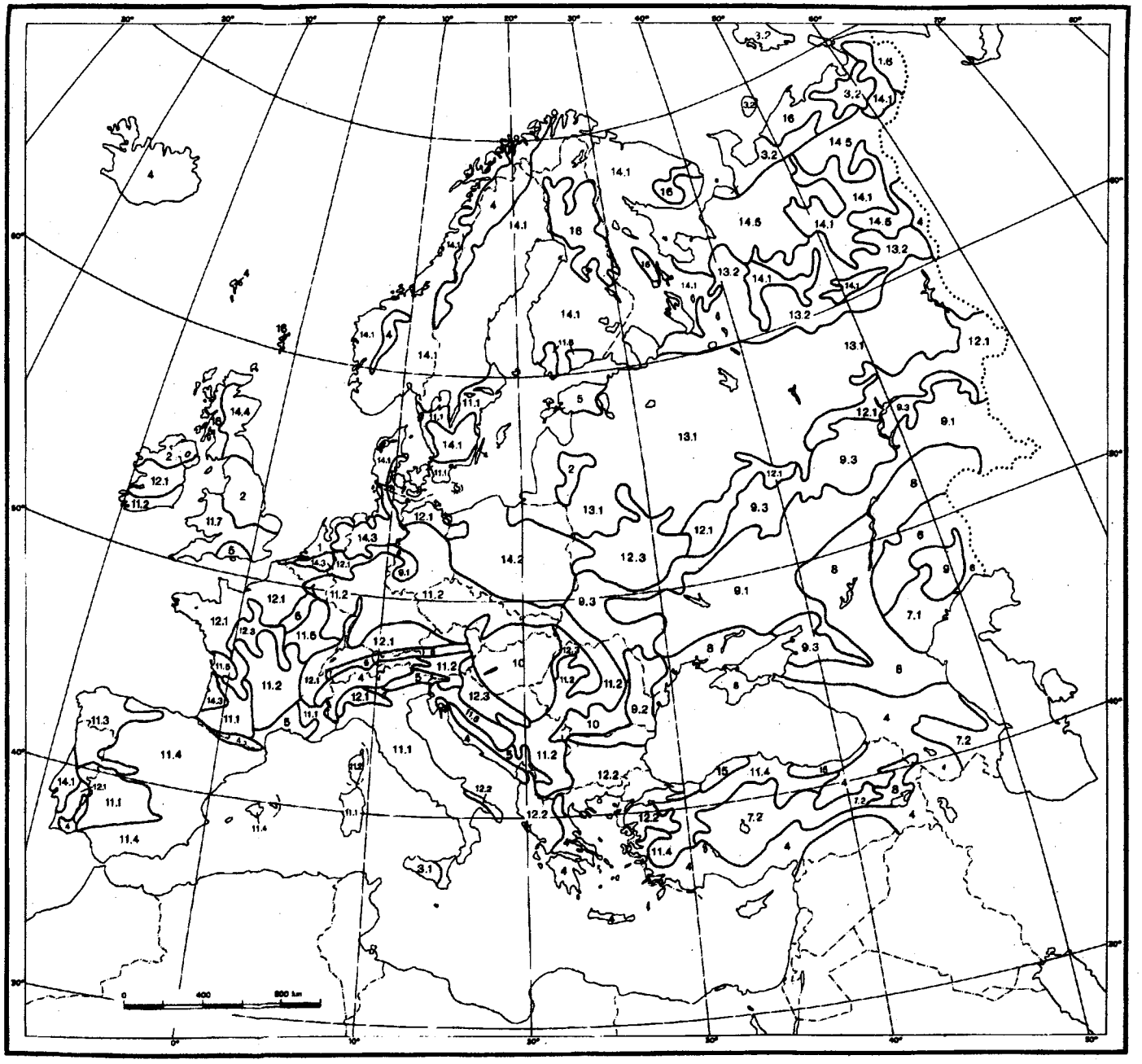
10. Polar
10.1 Tiaga
10.2 Tundra
10.3 Ice-Cap
10.5 Alpine

Fig. 4.1 Climatic regions of Europe. From FAO (1981) Soil Map of Europe – Appendix.



1. Marine Aluvia
2. Fluvial Aluvia
3. Aeolian sediments (loess sand)
4. Glacial Sediments and Outwash
5. Quaternary Sediments (unspecified)
6. Locally thin Quaternary Sediments of Various Origins

Fig. 4.2 The major quaternary sediments of Europe. From FAO (1981) Soil Map of Europe - Appendix .



1. Fluvisols
2. Gleysols
3. Regosols
3.1 Eutric and Calcaric Regosols
3. 2 Gelic Regosols
4. Lithosols
5. Rendzinas
6. Solonetz
7. Xerosols
7.1 Haplic and Luvic Xerosols
7.2 Calcic Xerosols
8. Kastanozems
9. Chernozems
9.1 Haplic Chernozems
9.2 Calcic Chernozems
9.3 Luvic Chernozems
10. Phaeozems
11. Cambiosols
11.1 Eutric Cambiosols
11.2 Dystric Cambisols
11.3 Humic Cambiosols
11.4 Calcic Cambiosols
11.5 Chromic Cambiosols
11.6 Vertic Cambiosols
11.7 Canbiosols Complex
12. Luvisols
12.1 Orthic Luvisols
12.2 Chromic Luvisols
12.3 Gleyic Luvisols
13. Podzoluvisols
13.1 Eutric Podzoluvisols
13.2 Dystric Podzoluvisols
14. Podzols
14.1 Orthic Podzols
14.2 Leptic Podzols
14.3 Humic Podzols
14.4 Placic Podzols
14.5 Gleyic Podzols
15. Acrisols
16. Histosols
17. Dunes and Shifts sands Complex

Fig 4.3 The major soil groups of Europe. From FAO (1981) Soil Map of Europe: Appendix.

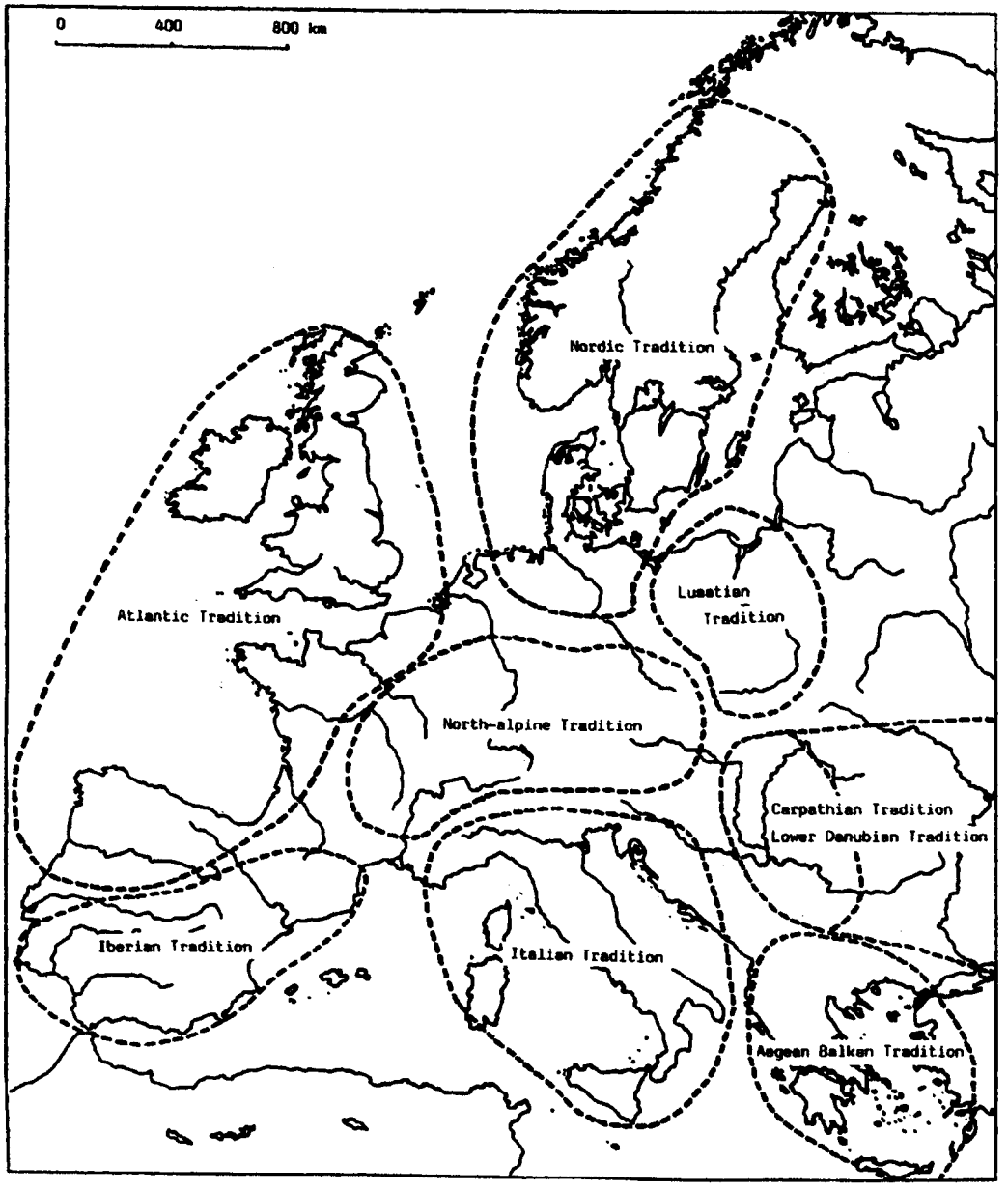


Fig. 5.1 Late Bronze Age regional traditions (1100-750 BC). From: Kristiansen (1998, 64).

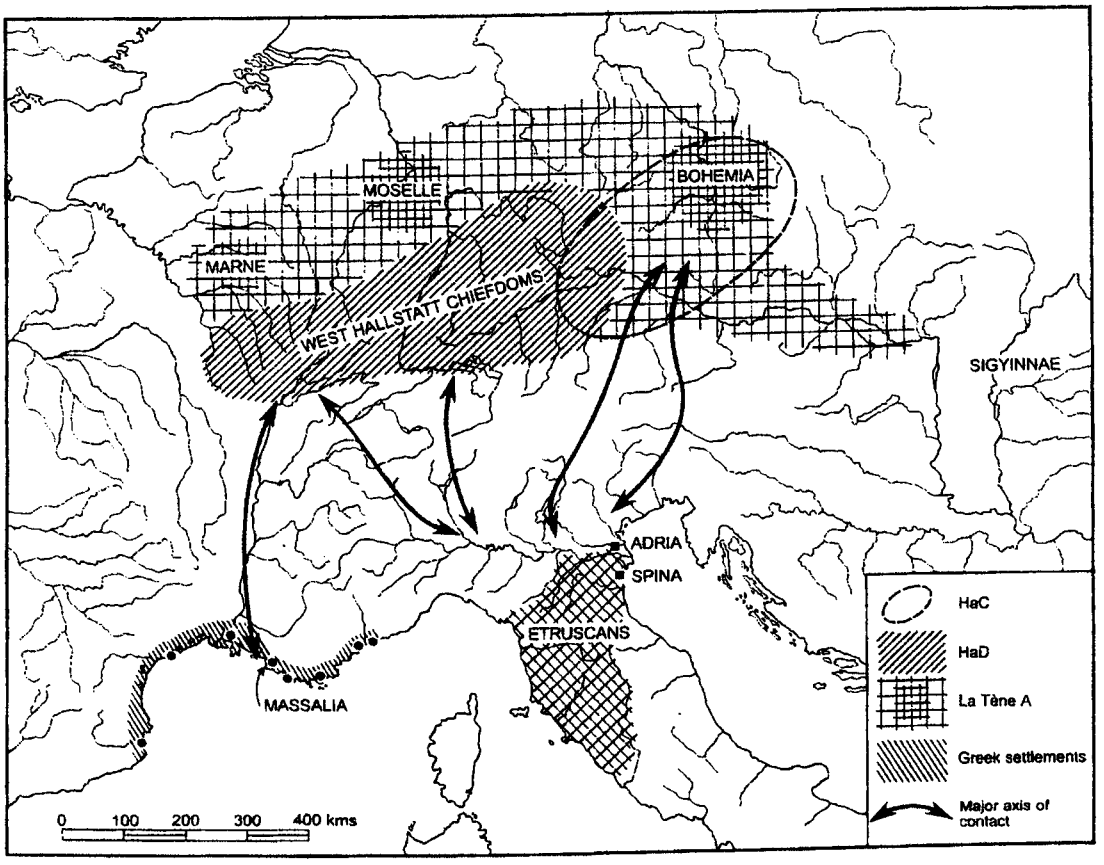


Fig. 5.2 Distribution of Hallstatt Chiefdoms. From: Cunliffe 1997, 64.

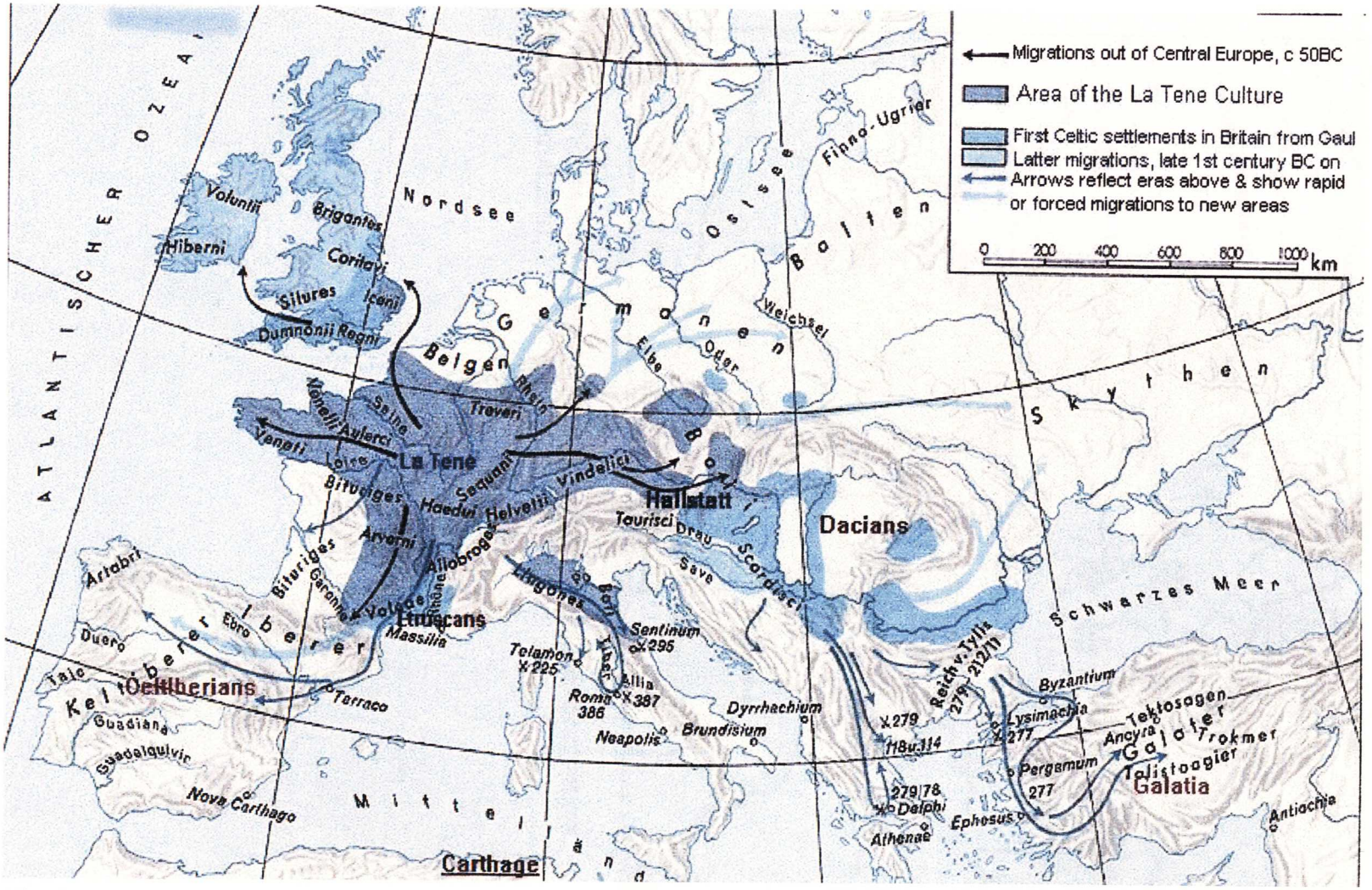


Fig. 5.3

Map showing the maximum extent of La Tène culture and main routes of migration. From: http://members.aol.com/skyelander/celts3.html.

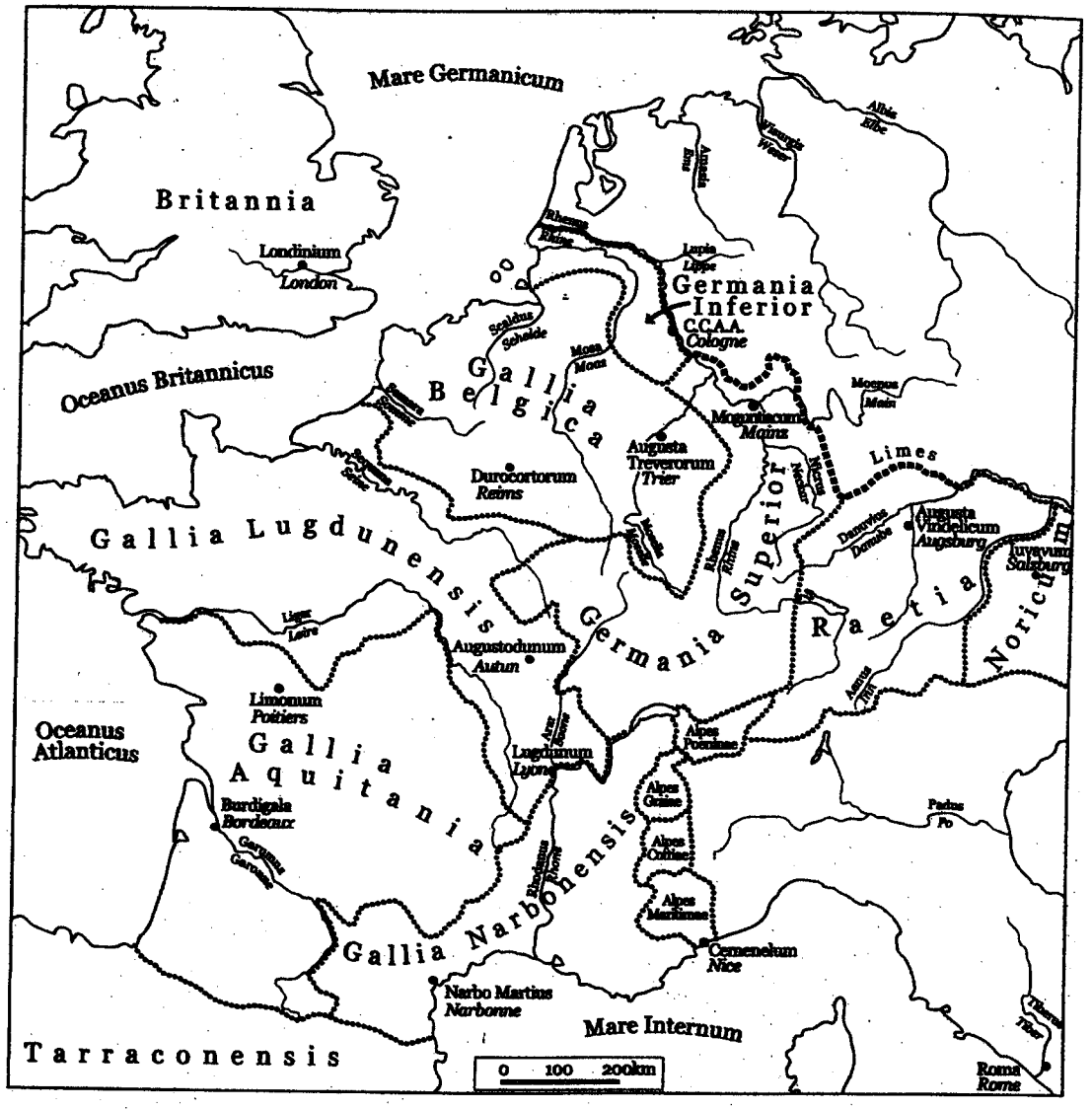


Fig. 5.4 Provinces of the western Empire with main administrative centres.
From: Carroll 2001, 11.

Common names used in this review	**Latin binomial***
einkorn	*Triticum monococcum* L. ssp. *monococcum*
emmer	*Triticum turgidum* L. ssp. *dicoccum* Schübl.
spelt	*Triticum aestivum* L. ssp. *spelta* (L.) Thell.
glume wheat	*Triticum monococcum/dicoccum/spelta*
durum wheat	*Triticum turgidum* L. ssp. *durum* (Desf.) Husn.
bread wheat	*Triticum aestivum* L. ssp. *aestivum* *Triticum aestivum* L. ssp. *compactum* (Host.) MacKey
free threshing wheat	*Triticum aestivum/durum*
barley	*Hordeum vulgare* L. ssp. *vulgare*
rye	*Secale cereale* L. ssp. *cereale*
oat	*Avena sativa* L. sp.

Table 2.1
Key to cereal terminology used. *Note that wheat nomenclature follows van Slageren (1994). See also: USDA-ARS (2006); WGRC (2005).

Source of Data	Region	Author	Date	No. of reports
ROMANS Computer database for European botanical macro-remains.	Europe with an emphasis on Germany	Maintained and provided by Dr. Helmut Kroll, Institut für Ur- und Frühgeschichte, Christian-Albrechts-Universität, Kiel, Germany (in collaboration with Dr. Angela Kreuz Landesamt für Denkmalpflege Hessen, Wiesbaden).	2000	696
Agriculture et alimentation végétale durant l' âge du Fer et l' époque gallo-romaine en France septentrionale. – published synthesis of French botanical macro-remains.	The Septentrionale region of northern France	Dr. Véronique Matterne (Institut National de Recherche Archéologique Préventive [INRAP], Paris, France).	2001	77
ABCD Archaeobotanical Computer Database for British botanical macroremains.	Britain	Initiated by Dr. Philippa Tomlinson and currently maintained by Dr. Alan Hall, University of York.	1999	284
RADAR Relational Archaeobotanical Database for Advanced Research, computer database for Dutch botanical macro-remains.	The Netherlands	Maintained and provided by Dr. Otto Brinkkemper, Rijksdienst voor het Oudheidkundig Bodemonderzoek (ROB), Amersfoort.	2001	406
Internal database of Swiss botanical macro-remains. Institut für Prähistorische und Naturwissenschaftliche Archäologie, Universität Basel.	Switzerland	Internal database provided by Dr. Stefanie Jacomet & Dr. Christoph Brombacher Institut für Prähistorische und Naturwissenschaftliche Archäologie, Universität Basel.	2000	20
Unpublished list of sites offering botanical macro-remains.	Greece	Fragkiska Megaloudi (American School of Classical Studies/University of the Aegean, Rhodes Greece)	2002	10
Literatur über archäogische Kulturpflanzenreste (1968-1991); *Vegetation History and Archaeobotany* (1992-2001)	Italy and Greece	Initiated by the late Jürgen Schultze-Motel and currently maintained by Dr. Helmut Kroll	1968-1998	62

Table 2.2
List of the main sources utilised in the acquisition of the data.

Country/site	reference
Germany	
Schwennenz 20	Gringmuth-Dallmer and Leiciejewicz 2002
Flögeln	Behre and Kucan 1994
Hardthausen-Lampoldshausen	Piening U. 1982
Köln	Knörzer 1992
Künzing	Küster 1995
Lahr Dinglingen	Rösch 1995
Archsum	Kroll 1987
Manching	Küster 1992
Neuss	Knörzer 1970
Niederlbach	Küster 1995
Riedlingen/Klinge	Bouchette and Rösch 1996
Steinbühl	Willerding and Wolf 1990
Bad Dürkheim	Piening 1988
Welzheim	Körber-Grohne and Piening 1983
Xanten	Knörzer 1981
Bondorf	Körber-Grohne and Piening 1979
Boomborg/Hatzum	Behre 1970
Mühlheim-Stetten	Rösch et al. 1992
Bentumersiel	Behre 1977
Bergheim	Knörzer 1976
Mainz Lotharpassage	Zach 2002
Greece	
Assiros Toumba	Jones 1983
Heraion of Samos	Kučan 1995
Iolkos	Jones 1982
Lerna	Hopf 1962
Mesopotamon	Dennell 1974
Ossa	Adam-Veleni et al. 1995
Sanctuary of Demeter and Kore	Bookidis et al. 1999
Kastanas	Kroll 1983
Nicopolis ad Istrum	In progress: used by permission of A. Poulter
France	
Acy-Romance "La Warde"	Lambot and Méniel 1998
Amiens "Zac Cathedrale"	Matterne et al. 1998
Attilly	Dubois 1998
Bailly	Matterne 2001
Bazoches-Sur-Vesle "Les Chantraines"	Matterne 2001
Betheny	Matterne 2001
Bucy-Le-Long "Le Grand Marais"	Pommepuy et al. 1995
Bussy-St-Georges "Le Champ Fleuri Nord"	Buchez et al. 1993
Cagny "Ferme de L' Epinette"	Barbet 1995
Cairon	Forfait et al. 1993
Chambly "La Marnière"	Fémolant Malrain 1996
Changis-Sur-Marne "Les Pétreaux"	Lafage et al 1997
Ciry-Salsogne "Le Bruy"	Cottiaux and Thouvenot 1998
Cizancourt	Lefévre 1999
Compans "Ouest du Parc"	Matterne 2001

Table 2.3
List of sites in the database

Conchil Le Temple "La Commanderie"	Lemaire and Rossignol 1996
Courdimanche "Le Fief à Cavan"	Marcille 1997
Crevéchamps "Tronc du Chêne" et "Sous Vesle"	Matterne 2001
Dury "Le Camp Rolland"	Favier and Quérel 1995
Eaucourt	Matterne 2001
Ennemain lt.	Petitot 1998
Ennemain gr.	Petitot 1998
Forest Momthiers "Le Fond de Bernay"	Quere 1998
Ham "Le Bois aux Cailloux"	Duvette 1995
Herblay "Gaillon le Bas"	Buchsenschutz and Marion 1995
Herleville	Prilaux 1999
Houdan "Les Brosses"	Philippe et al 1994
Jaux "Le Camp du Roi"	Malrain et al. 1996
Jouars Ponchartrain "La Ferme d' ithe"	Zwierzinski 1999
La Croix Saint Ouen "Les Longues raies"	Talon 1982
Lime "La Prairie"	Hénon and Robert 1998
Longueuil-Sainte-Marie "Le Vivier_des Gres"	Marnival 1992
Louvres "Le Vieux Moulin"	Casadei 2000
Maisnil-lès-Ruitz "Chemin de Lens"	Gaillard 1997
Marolles Sur Seine "Le Chemin de Sens"	Seguier 1995
Mauregard "Echelle Haute"	Matterne 2001
Mauregard "La Fossette"	Matterne 2001
Melun "Palais de Justice: Zac Gruber"	Lecoz 1997
Oroer "Sous le Bois Saint-Martin"	Gaillard and Parent 1994
Paris "Rue Pierre et Marie Curie"	Matterne 2001
Pont Rémy "La Queute et Le Fond Baraquin"	Bakels 1999
Pont-Sainte Maxence "Le Jonquoire"	Prilaux 1995
Rouen "Place-Foch"	Lequoy 1994
Rouen "Théatre des Arts"	Lequoy 1994
Roye "Le Puits à Marne"	Collart, in press
Saint Gibrien "Le Dessus du Vieux Pont"	Villes 1995
Sermoise "Les Prés du Bout de la Ville"	Gransar 1998
Sorrus "La Pature á Vaches"	Matterne 2001
Tagnon "La Fricassée"	Matterne 2001
Thaon	Forfait et al. 1993
Tremblay "Le Nouret"	Marcille 1997
Villers Vicomte- "La Rosière"	Prilaux 1994
Italy	
Acquarossa	Hjelmqvist 1989
Nave	Rottoli 1987
Setore 9 area 4 and 5 (Rome)	Motta 2002
House 11-12 (Amarantus/Pompeii)	Fulford and Wallace-Hadrill 1999
Oria	Ciaraldi 1997
Roccagloiosa 1	Costantini and Fitt 1990
Tombs Via Sacra (Rome)	Helbaek 1956
Via Sacra Archaic (Rome)	Helbaek 1953
Lomello	Castelletti 1975
Narce	Jarman 1976
Castellaro di Uscio	Nisbet 1990
Filattiera-Sorano	Rottoli and Negri 1998

Table 2.3 (continued)

Mezzocorona	Castiglioni and Rottoli 1994
Ortu Comidu	Wetterstrom 1986
Via Sacra-Atrium Vestae (Rome)	Giogi 1988
Ischia	Coubray 1994
Simione Via Antiche 11	Rottoli 1998
Monte Bibele	Accorsi et al. 1982
Via T Grossi (Mariano Comense)	Castiglioni et al. 1999
Satrianum	Holloway 1970
Schluderns	Oeggl 1992
St Omobono	Costantini 1989
Switzerland	
Arconciel - pre de l'arche (ARC 0657)	Jacomet and Brombacher 2000
Augst (AUG 6036)	Jacomet and Brombacher 2000
Balzers Amthaus (BAL)	Jacomet and Brombacher 2000
Basel-Gasfabrik (BGF 6019)	Jacomet and Brombacher 2000
Reinach (BLRM 6086)	Jacomet and Brombacher 2000
Basel (BRG)	Jacomet and Brombacher 2000
Cheyres (CES)	Jacomet and Brombacher 2000
Chevenez(CHEEV)	Jacomet and Brombacher 2000
Kaiseraugst (KSM 6013))	Jacomet et al. 1988
Therwil (THW 6129)	Jacomet and Brombacher 2000
Vindonissa (V 6054)	Petrucci-Bavaud et al 2000
Biberist	S. Jacomet, in preparation
Kaiseraugst Tophouse (KAT)	Jacomet, in preparation
Windisch Breite (VBR)	Jacomet et al 2002
Britain	
Abingdon	Jones and Robinson 1986
Carmarthen	Hillman 1978 (a)
Catsgore	Hillman 1982
Chester House	van der Veen 1992
Chalk (near Gravesend)	Arthur and Metcalfe 1972
Dunston's Clump	Jones 1987a
Forum Grain, London	Straker 1984
Ilchester	Murphy 1982
South Shields	van der Veen 1994a
Stanwick	van der Veen 1992
Thorpe Thewles	van der Veen 1987
Waterfront	Straker 1984
Rock Castle	van der Veen 1994b
Aston Mill Farm	Ede 1990
Ounces Barn	Hinton 1995
Bierton	Jones 1986
Colchester	Murphy1984
Coney Street, York	Williams 1979
Dod Law West	van der Veen 1992
Deansway	Moffett 1995
Half Penny Ln. (Didcot)	Carruthers 1991
Maiden Castle	Palmer and Jones 1991
Mingies Ditch	Robinson 1993
Old Shifford Farm	Robinson 1995

Table 2.3 (continued)

Poundbury	Monk 1987
Danebury	Jones 1984
Dragonby	van der Veen 1996
Gamston	Moffet 1992
Murton	van der Veen 1992
Thornbrough	van der Veen 1992
Baleshare	Jones 2003
Hornish Point	Jones 2003
Viables Farm	Green 1982
The Netherlands	
Nijmegen-Kops Plateau	Buurman 1988a
Oss-Ijsselstraat-Rom	Bakels 1980
Son en Breugel-Hooidonkse Akkers	Bakels and van der Ham 1981
Valkenburg-Marktveld iii	RADAR 2001
Midden-Delfland 15.04 (Maasland)	RADAR 2001
Midden-Delfland 16.59 (Maasland)	RADAR 2001
Zuidland 17-27	Brinkkemper 1993
Nieuwenhoorn 09-89	Brinkkemper 1993
Spijkenisse 17-30	Brinkkemper 1993
Abbenbroek 17-22	Brinkkemper 1993
Spijkenisse 17-34	Brinkkemper 1993
Zuidland 16-15	Brinkkemper 1993
Spijkenisse 17-35	Brinkkemper 1993
Geervliet 17-55	Brinkkemper 1993
Rockanje ii	Brinkkemper 1993
Rockanje 08-52	Brinkkemper 1993
Rotterdam-Terbregge 06-23	RADAR 2001
Rockanje 08-54	RADAR 2001
Midden-Delfland 11.17 (Maasland)	RADAR 2001
Uitgeest-Floretijnse Veld	Buurman 1988b
Oosterhout	Buurman 1990
Borculo	RADAR 2001
Opperdoes	Buurman 1993
Oss-Schalkskamp	Fokkens 1991
Assendelver Polders site d	Groenman-van Waateringe and Pals 1983
Assendelver Polders site k	Groenman-van Waateringe and Pals 1983
Assendelver Polders site f	Groenman-van Waateringe and Pals 1983
Assendelver Polders site p	Groenman-van Waateringe and Pals 1983
Assendelver Polders site h	Groenman-van Waateringe and Pals 1983
Assendelver Polders site c	Groenman-van Waateringe and Pals 1983
Schagen-Muggenburg	RADAR 2001
Nijmegen-Canisiuscollege ii	de Hingh and Kooistra 1994
Maastricht-Randwijck ii	Knippels 1991
Nijmegen-Canisiuscollege	Kooistra 1989
Maastricht-Houtmaas	Kuijper 1984
Alphen Aan Den Rijn-Julianastraat	Kuijper and Turner 1992
Wijk Bij Duurstede-De Horden	Lange 1990
Enschede-Elferinkse Es	RADAR 2001
Valkenburg-Marktveld ii	Pals et al. 1989
Dommelen-Kerkakkers ii	Roymans 1985
Maastricht-Plankstraat 23	RADAR 2001

Table 2.3 (continued)

Valkenburg-Castellum ii	Troostheide and Groenman-van Waateringe 1988
Den Haag-Scheveningse Weg-Tempel	RADAR 2001
Santpoort-Spanjaardsberg	Wieland Los 1961
Wijster	van Zeist 1967
Valkenburg-Castellum i	van Zeist 1968
Ouddorp-Oude Oostdijk	van Zeist 1968
Dalfsen	van Zeist 1968
Aardenburg	van Zeist 1968
Groningen-Paddepoel	van Zeist 1974
Schiedam-Kethel	van Zeist 1974
Sneek-Nieuwe Jachthaven	van Zeist 1974
Tritsum	van Zeist 1974
Vlaardingen-Broekpolder	van Zeist 1974
Ouddorp-Oude Ostdijk Revisited	van Zeist 1974
Ede-Veldhuizen	van Zeist 1976
Noordbarge-Hooge Loo	van Zeist 1983
Middelstum-Boerdamsterweg	van Zeist 1989
Peelo-De Es	van Zeist and Palfenier-Vegter 1994
Oss-Ussen iv	Bakels 1998
Rockanje 08-53	RADAR 2001
Lieshout/lierop	RADAR 2001
Duifpolder 11-17 (huis 2)	RADAR 2001
Herveskesklooster	Cappers 1994
Peelo-Haverland ii	van Zeist and Palfenier-Vegter 1996
Voerendaal-Ten Hove	Kooistra 1996
Maasbracht-Steenakker	Kooistra 1996
Geervliet 10-172	RADAR 2001
Emst	Casparie 1976
Oirlo-Stokven	Roymans and Hiddink 1991
Alphen a/d Rijn-Rijksweg 11 (locat. 3)	Aldred et al. 1992
Texel-Den Burg-Beatrixlaan	van Zeist 1997
Castricum-Oosterbuurt	Brinkkemper and de Man 1999
Katwijk-Zanderij	RADAR 2001
Groesbeek-Klein Amerika	RADAR 2001
Woerden-Hoek Molenstraat/Kazernestraat	RADAR 2001
Bunnik-Vechten Castellum	RADAR 2001
Raalte-Raan	RADAR 2001
Herwen-Rijnwaarden	RADAR 2001
Wierden-Enter Baanakkers	RADAR 2001
Wijnaldum-Tjitsma	Pals 1999
Leidsche Rijn Ir2-1997	RADAR 2001
Bunnik-Singel West	RADAR 2001
Kesteren-De Woerd	Kooistra and van Haaster 2001
Vlaardingen-Hoogstad 6.36	Brinkkemper and de Ridder 2000
Vlaardingen-Kolpabad 6.123	Brinkkemper and de Ridder 2000
Limmen-Schulpvaart	RADAR 2001
Meteren-Lage Blok	de Roller et al. 2002
Maastricht-Pandhof	Bakels and Dijkman 2000
Maastricht-Amby	Bakels and Dijkman 2000
Maastricht-Derlon	Bakels and Dijkman 2000
Maastricht-Houtmaas ii	Bakels and Dijkman 2000
Cuijk-Havenlaan	RADAR 2001

Table 2.3 (continued)

Cuijk-Nielt	RADAR 2001
Peins-Oost	RADAR 2001
Oss-Ussen Westerveld	Bakels et al. 1997
Oss-Ussen Vijver	Bakels et al. 1997
Vleuterweide-Wilhelminalaan	RADAR 2001
Vleuten-Balije	RADAR 2001
Geldermalsen-Kalenberg	RADAR 2001
Leeuwarden-Bullepolder	RADAR 2001

Table 2.3 (continued)

broad category used for data analysis	*plant part as recorded in published account*	*operation performed*
wild Avena lemma base	Avena fatua lemma base	conflated as wild Avena lemma base
" " " "	Avena fatua type lemma base	conflated as wild Avena lemma base
" " " "	Avena fatua/ludoviciana lemma base	conflated as wild Avena lemma base
cultivated Avena lemma base	Avena sativa lemma base	recognised as cultivated Avena lemma base
	Avena sp. lemma base	assigned proportionately to wild Avena lemma base and cultivated Avena lemma base
	Avena floret	assigned proportionately to wild Avena lemma base and cultivated Avena lemma base
Avena seed	Avena fatua seed	conflated as Avena seed
" "	Avena sativa seed	conflated as Avena seed
" "	Avena cf. sativa seed	conflated as Avena seed
" "	Avena sp. twisted seed	conflated as Avena seed
" "	Avena fatua/ludoviciana seed	conflated as Avena seed
" "	Avena sativa/strigosa seed	conflated as Avena seed
" "	Avena strigosa seed	conflated as Avena seed
" "	Avena fatua/sativa seed	conflated as Avena seed
" "	Avena sp. seed	conflated as Avena seed
" "	cf. Avena sp. seed	conflated as Avena seed
Hordeum rachis internode	Hordeum cf. 2-row rachis internode	conflated as Hordeum rachis internode
" " "	Hordeum polystichum rachis internode	conflated as Hordeum rachis internode
" " "	Hordeum vulgare 6-row rachis internode	conflated as Hordeum rachis internode
" " "	Hordeum 6-row rachis internode	conflated as Hordeum rachis internode
" " "	Hordeum vulgare rachis internode	conflated as Hordeum rachis internode
" " "	Hordeum sp. rachis internode	conflated as Hordeum rachis internode
" " "	Hordeum vulgare/distichon rachis internode	conflated as Hordeum rachis internode
" " "	Hordeum glume base	conflated as Hordeum rachis internode
	Hordeum ear	assigned as 3 Hordeum seeds and 1 Hordeum rachis internode (M.N.I.)
	Hordeum vulgare ear	assigned as 3 Hordeum seeds and 1 Hordeum rachis internode (M.N.I.)
Hordeum seed	Hordeum sativum hulled seed	conflated as Hordeum seed
" "	Hordeum sp. hulled seed	conflated as Hordeum seed
" "	Hordeum vulgare hulled seed	conflated as Hordeum seed
" "	Hordeum vulgare asymmetric hulled seed	conflated as Hordeum seed
" "	Hordeum vulgare 6-row hulled seed	conflated as Hordeum seed
" "	Hordeum vulgare symmetric hulled seed	conflated as Hordeum seed

Table 2.4 List of plant parts as derived from published accounts and the operations used to distribute them into broad categories

" "	Hordeum 6-row hulled seed	conflated as Hordeum seed
" "	Hordeum hulled seed	conflated as Hordeum seed
" "	Hordeum hulled asymmetric seed	conflated as Hordeum seed
" "	Hordeum vulgare hexastichum nudum seed	conflated as Hordeum seed
" "	Hordeum sativum naked seed	conflated as Hordeum seed
" "	Hordeum vulgare asymmetric naked seed	conflated as Hordeum seed
" "	Hordeum vulgare naked seed	conflated as Hordeum seed
" "	Hordeum vulgare symmetric naked seed	conflated as Hordeum seed
" "	Hordeum vulgare nudum seed	conflated as Hordeum seed
" "	Hordeum vulgare var. nudum seed	conflated as Hordeum seed
" "	Hordeum vulgare cf. nudum seed	conflated as Hordeum seed
" "	Hordeum vulgare/distichum cf.nudum seed	conflated as Hordeum seed
" "	Hordeum nudum seed	conflated as Hordeum seed
" "	Hordeum vulgare polystichum seed	conflated as Hordeum seed
" "	Hordeum hexastichum seed	conflated as Hordeum seed
" "	Hordeum vulgare hexastichon seed	conflated as Hordeum seed
" "	Hordeum vulgare hexasticum seed	conflated as Hordeum seed
" "	Hordeum tetrastichum seed	conflated as Hordeum seed
" "	Hordeum vulgare/distichon seed	conflated as Hordeum seed
" "	Hordeum vulgare/distichum seed	conflated as Hordeum seed
" "	Hordeum cf. vulgare/distichon seed	conflated as Hordeum seed
" "	Hordeum cf. polystichum indet. seed	conflated as Hordeum seed
" "	Hordeum cf. polystichum symmetric seed	conflated as Hordeum seed
" "	Hordeum cf. sativum seed	conflated as Hordeum seed
" "	Hordeum polystichum asymmetric seed	conflated as Hordeum seed
" "	Hordeum sativum asymmetric seed	conflated as Hordeum seed
" "	Hordeum sativum indet. seed	conflated as Hordeum seed
" "	Hordeum sp. asymmetric seed	conflated as Hordeum seed
" "	Hordeum sp. seed	conflated as Hordeum seed
" "	Hordeum sp. symmetric seed	conflated as Hordeum seed
" "	Hordeum vulgare 6-row seed	conflated as Hordeum seed
" "	Hordeum vulgare vulgare seed	conflated as Hordeum seed
" "	Hordeum cf. vulgare seed	conflated as Hordeum seed

Table 2.4 (continued)

" "	Hordeum vulgare seed	conflated as Hordeum seed
" "	cf. Hordeum sp. seed	conflated as Hordeum seed
" "	Hordeum sp. straight seed	conflated as Hordeum seed
" "	Hordeum sp. twisted seed	conflated as Hordeum seed
" "	Hordeum lemma base	conflated as Hordeum seed
	Secale cereale rachis internode	not used on the basis that it was very rare
	Secale sp. rachis internode	not used on the basis that it was very rare
	Secale chaff	not used on the basis that it was very rare
Secale seed	Secale cereale seed	conflated as Secale seed
" "	cf. Secale sp. seed	conflated as Secale seed
Triticum aestivum/durum rachis internode	Triticum aestivum rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum aestivum type rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum aestivo-compactum rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum cf. aestivum rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum aestivum/durum rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum aestivum/durum/turgidum rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum durum/turgidum rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum sp. tough rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum tough rachis type rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum free-threshing rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum turgidum rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum durum rachis internode	conflated as Triticum aestivum/durum rachis internode
" " " "	Triticum cf. durum rachis internode	conflated as Triticum aestivum/durum rachis internode
	Triticum aestivum rachis internode	assigned as 3 T. aestivum/durum seeds and 1 T. aestivum/durum rachis internode
Triticum aestivum/durum seed	Triticum free-theshing seed	conflated as Triticum aestivum/durum seed
" " "	Triticum aestivum/durum/turgidum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum aestivum/turgidum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum aestivum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum aestivo-compactum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum aestivum compactum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum compactum seed	conflated as Triticum aestivum/durum seed

Table 2.4 (continued)

" " "	Triticum aestivum/turgidum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum aestivum type seed	conflated as Triticum aestivum/durum seed
" " "	Triticum cf. aestivum/durum/turgidum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum cf. aestivum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum cf. aestivo-compactum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum aestivum/durum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum durum/turgidum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum turgidum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum cf. aestivum/durum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum compactum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum compactum type seed	conflated as Triticum aestivum/durum seed
" " "	Triticum durum seed	conflated as Triticum aestivum/durum seed
" " "	Triticum vulgare seed	conflated as Triticum aestivum/durum seed
	Triticum aestivum/speltoid chaff	not used on the basis that it was rare and inaccurately identified
	Triticum aestivum/speltoid seed	not used on the basis that it was rare and inaccurately identified
	Triticum spelta/aestivum seed	treated as spelt in Britain but recorded only from sites where T. spelta clearly predominated
Triticum spelta glume base	Triticum spelta fork	multiplied by 2 and added to Triticum spelta glume base
" " " "	Triticum spelta type fork	multiplied by 2 and added to Triticum spelta glume base
" " " "	Triticum cf. spelta fork	multiplied by 2 and added to Triticum spelta glume base
" " " "	Triticum spelta glume	conflated as Triticum spelta glume base
" " " "	Triticum cf. spelta glume	conflated as Triticum spelta glume base
	Triticum spleta chaff	assigned as Tritcum spelta glume base
	Triticum spelta spikelets	assigned as 2 Triticum spelta seeds and 2 Triticum spelta glume bases
Triticum spelta seed	Triticum spelta seed	conflated as Triticum spelta seed
" " "	Triticum spelta type seed	conflated as Triticum spelta seed
" " "	Triticum cf. spelta seed	conflated as Triticum spelta seed
	Triticum sp. fork	multiplied by 2 and added to T. dicoccum/spelta glume then assigned proportionally to spelta and dicoccum glume
	Triticum hulled fork	multiplied by 2 and added to T. dicoccum/spelta glume then assigned proportionally to spelta and dicoccum glume

Table 2.4 (continued)

	Triticum monococcum/dicoccum/spelta glume base	assigned proportionately to T. spelta and dicoccum glume base
	Triticum monococcum/spelta glume base	assigned proportionately to T. spelta and dicoccum glume base
	Triticum sp. glume base	assigned proportionately to T. spelta and dicoccum glume base
	Triticum dicoccum/spelta glume base	assigned proportionately to T. spelta and dicoccum glume base
	Triticum dicoccon/spelta glume base	assigned proportionately to T. spelta and dicoccum glume base
	Triticum dicoccum/spelta fork	multiplied by 2 and added to T. dicoccum/spelta glume then assigned proportionally to spelta and dicoccum glume base
	Triticum dicoccon/spelta fork	multiplied by 2 and added to T. dicoccum/spelta glume then assigned proportionally to spelta and dicoccum glume base
	Triticum dicoccum/spelta seed	assigned proportionately to T. spelta and dicoccum seed
	Triticum dicoccon/spelta seed	assigned proportionately to T. spelta and dicoccum seed
Triticum dicoccum glume base	Triticum dicoccum fork	multiplied by 2 and added to Triticum diccocum glume base
" " " "	Triticum dicoccum type fork	multiplied by 2 and added to Triticum diccocum glume base
" " " "	Triticum cf. diococcum fork	multiplied by 2 and added to Triticum diccocum glume base
" " " "	Triticum dicoccon fork	multiplied by 2 and added to Triticum diccocum glume base
" " " "	Triticum dicoccum glume base	conflated as Triticum dicoccum glume base
" " " "	Triticum cf. dicoccum glume base	conflated as Triticum dicoccum glume base
" " " "	Triticum cf. dicoccum glume base	conflated as Triticum dicoccum glume base
" " " "	Triticum dicoccon glume base	conflated as Triticum dicoccum glume base
" " " "	Triticum cf. dicoccon glume base	conflated as Triticum dicoccum glume base
" " " "	Triticum dicoccum chaff	conflated as Triticum dicoccum glume base
	Triticum dicoccum spikelet	assigned as 2 Triticum dicoccum seeds and 2 Triticum dicoccum glume bases
	Triticum dicoccum ear	assigned as 2 Triticum dicoccum seeds and 2 Triticum dicoccum glume bases
Triticum dicoccum seed	Triticum dicoccon seed	conflated as Triticum dicoccum seed
" " "	Triticum dicoccum seed	conflated as Triticum dicoccum seed
" " "	Triticum dicoccum type seed	conflated as Triticum dicoccum seed
" " "	Triticum dicoccum 1seeded seed	conflated as Triticum dicoccum seed
" " "	Triticum dicoccum 2 seeded seed	conflated as Triticum dicoccum seed
" " "	Triticum cf. dicoccum seed	conflated as Triticum dicoccum seed
" " "	Triticum cf. dicoccon seed	conflated as Triticum dicoccum seed

Table 2.4 (continued)

	Triticum monococcum/dicoccon fork	not used on the basis that it was rare and inaccurately identified
	Triticum monococcum/dicoccum fork	not used on the basis that it was rare and inaccurately identified
	Triticum monococcum/dicoccon glume base	not used on the basis that it was rare and inaccurately identified
	Triticum monococcum/dicoccum glume base	not used on the basis that it was rare and inaccurately identified
	Triticum monococcum/dicoccum glume base	not used on the basis that it was rare and inaccurately identified
	Triticum monococcum/dicoccum seed	not used on the basis that it was rare and inaccurately identified
	Triticum monococcum/dicoccon seed	not used on the basis that it was rare and inaccurately identified
Triticum monococcum glume base	Triticum monococcum fork	multiplied by 2 and added to Triticum moncoccum glume
" " " "	Triticum monococcum glume base	conflated as Triticum monococcum glume base
" " " "	Triticum cf. monococcum glume base	conflated as Triticum monococcum glume base
Triticum monococcum seed	Triticum monococcum seed	conflated as Triticum monococcum seed
" " "	Triticum cf. monococcum seed	conflated as Triticum monococcum seed
" " "	Triticum cf. monococcum 1 seeded seed	conflated as Triticum monococcum seed
" " "	Triticum cf. monococcum 2 seeded seed	conflated as Triticum monococcum seed
" " "	Triticum monococcum type seed	conflated as Triticum monococcum seed
" " "	Triticum monococcum 1 seeded seed	conflated as Triticum monococcum seed
" " "	Triticum monococcum 2 seeded seed	conflated as Triticum monococcum seed
Triticum seed	Triticum sp. seed	conflated as Triticum seed
" "	cf. Triticum sp. seed	conflated as Triticum seed
" "	Triticum hexaploid seed	conflated as Triticum seed
" "	Triticum dicoccum/aestivum seed	conflated as Triticum seed

Table 2.4 (continued)

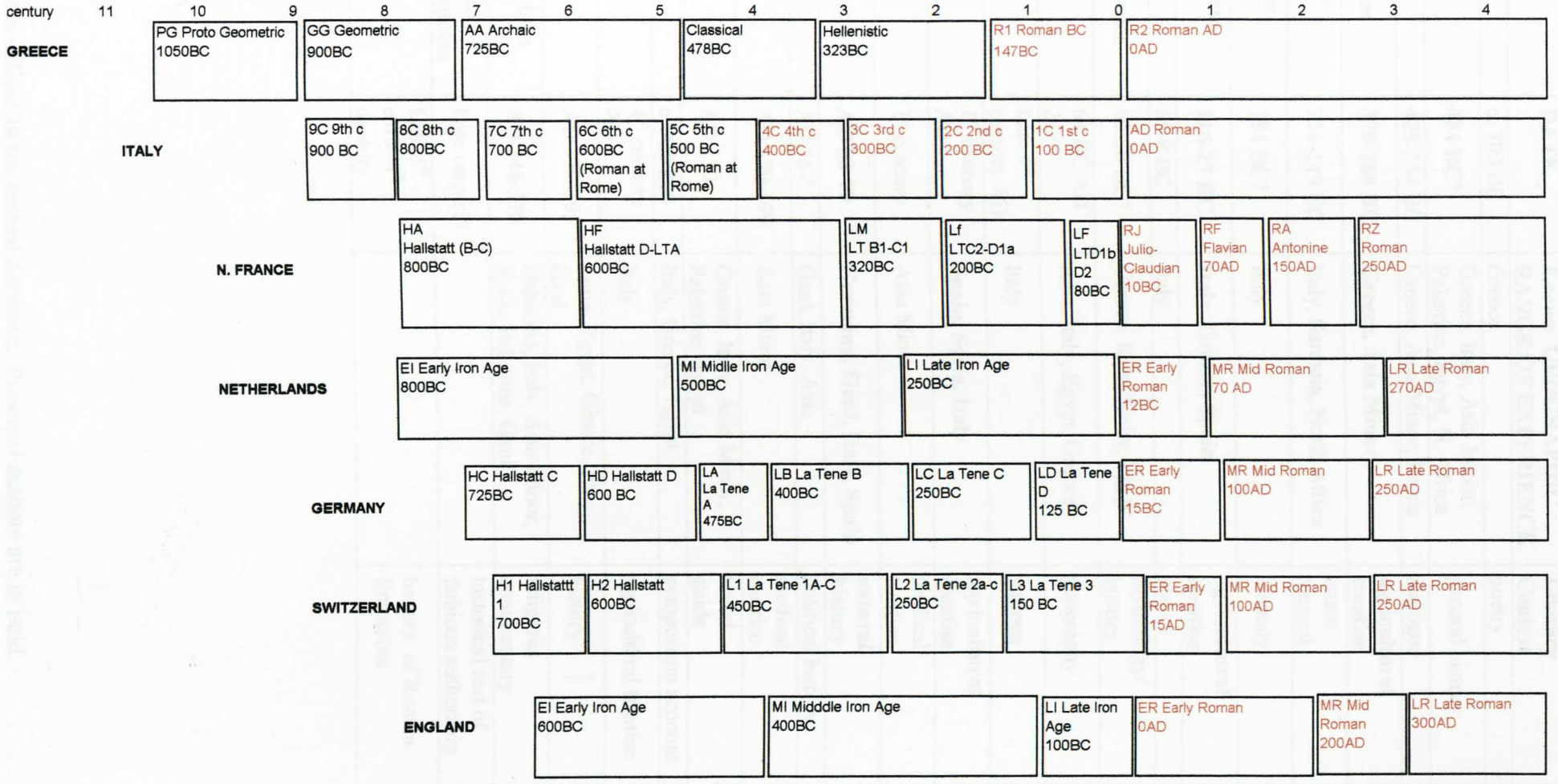


Table 2.5
Chronological framework used to categorise the samples for analysis. Roman dates are indicated in red.

AUTHOR	DATE	*Known* GEOGRAPHIC RANGE OF EXPERIENCE	Literary Context
Hesiod	c. 700 BC	Greece	poetry
Herodotus	484 BC?	Greece, Italy, Asia Minor, Palestine, Egypt, N. Africa	general history
Xenophon	428-354 BC	Greece, Asia Minor, Persia	dialogue
Theophrastus	**370-288 BC**	**Greece, Asia Minor**	**agricultural treatise**
Cato, Marcus Porcius	234-149 BC	Italy, Sardinia, North Africa	estate manual
Plautus, Titus Marcus	184 BC?	Italy	comedy
Varro, Marcus Terentius	**116-27 BC**	**Italy, Greece, Spain**	**agricultural treatise**
Horace	65-8 BC	Italy	poetry
Diodorus Siculus	60-30 BC?	Greece, Italy, Sicily, Egypt	mythology/ history
Strabo	64 BC-AD 21?	Asia, Italy, Egypt, Greece	geography
Probus	Late 1st century AD	Italy	various
Columella	**1st century AD**	**Spain, Syria, Italy**	**agricultural treatise**
Dioscorides Pedanius	1st century	Asia Minor	medical treatise
Pliny	**AD 23-79**	**Germany, Gaul, Italy, Spain**	**natural history**
Tacitus	AD 56-?	Gaul, Italy, Asia	political history
Galen	AD 129-199	Asia Minor	medical treatise
Pausanias	AD 150	Greece, Italy, Asia Minor, Palestine, Egypt	travel guide
Athenaeus	c. AD 200	Italy, Greece, Egypt	symposium account
Palladius	4th century AD	Italy	agricultural treatise
Ammianus Marcellinus	AD 330-395	Syria. Egypt, Greece, Italy, Gaul	history
Jerome, Eusebius Heironymus	AD 348-320	Dalmatia, Italy, Asia Minor, Syria, Palestine, Gaul	religious commentary
The Scriptores Historiae Augustae	Late empire?		historical text of dubious authorship
Zosimus	Late 5th - early 6th century		history of Roman Emperors

Table 2.6
List of authors utilised in the textual database. Principal authors are in bold.

CONTEXT		
Aetolia	Gaul	religion
Africa	grain exchange	risk
Akragas	Greece	Rome
anatomy	groats	rye
Asia	growth stage	sea trade
Assyrian	hard/soft	season
Babylon	harvest	seed
Bactria	heat/fire	Shetlands
barley	husk	Sicily
beer	Italy	soil
bread	leaven	sowing
breeding	Libyan	Spain
Britain	Macedonia	starch
Cilicia	maslin	storage
color	medical	straw
cooking	milling	Syria
copper	oat	Thessaly
cultivation	origins	Thracian
Egypt	Pannonia	types
experimentation	paper	water
extensive/intensive	Phocas	weeds
fertility	Phrygian	weight
flour	Pontus	wheat
fodder	processing	yields
France	rations	

Table 2.7
List of the contexts indexed to passages in the literary database.

Country	Number of samples (+cer items)				Number of sites		Number of samples per site (+cer items)				Number of sample with:		Number of cer items per sample			
	I.A.	Roman	Mixed	Total	Total	%	Min.	Max.	Mean	Median	>100 cer items	>1000 cer items	Min.	Max.	Mean	Median
Britain	316	279	164	759	33	13	1	118	23	14	192	27	1	9410	159	24
France	322	264	25	611	52	21	1	60	12	6	155	20	1	10871	248	14
Germany	238	201	0	439	21	8	1	74	21	5	118	44	1	244057	1289	16
Netherlands	291	422	35	748	101	40	1	151	7	2	141	37	1	36	350	9
Switzerland	134	301	0	435	12	5	1	128	33	13	79	49	1	69993	3426	4
Italy	9	90	12	111	22	9	1	30	5	1	21	6	1	2666	135	8
Greece	206	42	2	250	9	4	1	178	35	11	15	0	1	1000	41	7

Table 3.1
Sample details

Common Term	**Item**	**abrev.**
Wild oat lemma base	Wild *Avena* lemma base	w. oat lem
Cultivated oat lemma base	Cultivated *Avena* lemma base	c. oat lem
Oat grain	*Avena* grain	oat gr
Barley rachis	*Hordeum* rachis	bar rach
Barley grain	*Hordeum* grain	bar gr
Rye grain	*Secale* grain	rye gr
Free threshing wheat rachis	*T. aestivum/durum* rachis	ftw rach
Free threshing wheat grain	*T. aestivum/durum* grain (seed)	ftw gr
Spelt glume base	*T. spelta* glume base	spt glm
Spelt grain	*T. spelta* grain	spt gr
Emmer glume base	*T. dicoccum* glume base	em glm
Emmer grain	*T. dicoccum* grain	em gr
Einkorn glume base	*T. monococcum* glume base	ein glm
Einkorn grain	*T. monococcum* grain	ein gr
Wheat (indeterminate)	*Triticum* sp. grain	Trit gr

Table 3.2
Abbreviations utilised in the analyses

Highland Zone site	Lowland Zone site
Baleshire	Abingdon
Carmarthen	Aston Mill Farm
Chester House	Bierton
Dod Law West	Catsgore
Hornish Point	Chalk
Murton	Colchester
Rock Castle	Coney Street, York
South Shields	Danebury
Stanwick	Deansway
Thornbrough	Dragonby
Thorpe Thewles	Dunstons Clump
	Forum Grain, London
	Gamston
	Half Penny Lane
	Ilchester
	Maiden Castle
	Mingies Ditch
	Old Shifford Farm
	Ounces Barn
	Poundbury
	Viables Farm
	Waterfront, London

Table 3.3
British sites classified according to highland or lowland location.

Northern Sites	Southern Sites
Archsum	Bad Dürkheim
Bentumersiel	Bondorf
Bergheim	Hardthausen-Lampoldshausen
Boomborg/Hatzum	Künzing
Flögeln	Lahr Dinglingen
Köln	Mainz Lotherpassage
Neuss	Manching
Schwennenz20	Mühlheim-Stetten
Xanten	Niederlbach
	Riedlingen/Klinge
	Steinbühl
	Welzheim

Table 3.4
German sites classified according to northern or southern location.

Term employed in modern scientific/biological classification	Primary Classical Latin typification	Primary Classical Greek typification	Primary English translation
Triticum	*triticum* or *far*	*puros* or *sitos*	wheat
Hordeum	*hordeum*	*krithê*	barley
Avena	*avena*	*bromos*?	oat
Secale	*secale or asia*	?	Rye - to some however, "black spelt" (see entry in LS)

Table 8.1
Classical Greek and Latin epithets used to designate cereal genera.

GREEK wheat epithet (Romanized transcription of published word form)	Epithet as it appears in passage or dictionary	Passage/dictionary Ref.	Notes
Agyptios	Αἰγυπτιός	HPVIII.IV.3	Egypt
Aineian	Αἰνείαν	HPVIII.IV.4	Aineia in Macedon
Akragantinos	Ακραγαντῖνος	HPVIII.IV.6	Akragas (place name in Sicily)
Alexandros	Αλεξάνδειος	HPVIII.IV.3	Alexandria
Assyrioi	Ασσύριοι	HPVIII.IV.3	Assyria
Babylona	Βαβυλῶνά	HPVIII.XI.7	Babylon
Biotos	Βοιτός	HPVIII.IV.4	Boetian
dimenoi	δίμηνοί	HPVIII.IV.4	2 month type
Drakontias	Δπακοντίας	CPIII.21.2	Place name?
Elateian	Ελάτειαν	HPVIII.VIII.2	Elateia- Mycenean
Euboian	Εὐβοιαν	HPVIII.IV.4	Euboea
kamakian	καμακίαν	HPVIII.VII.4	"long shafted"
kaxrudias	καγχπυδίας	HPVIII.IV.3	resembling millet
krithanias	κριθανίας	HPVIII.II.3	branching type
Lakonikei	Λακωνικῇ	HPVIII.IV.5	Laconian
Libykoi	Λιβυκοὶ	HPVIII.IV.3	Libya
olura	ὀλύρα	HPVIII.I.5	used in connection with Egypt
Phocida	Φωκίδι	HPVIIII.VIII.2	Phocian
Pissangais	Πισσάγγαις	CPIV.9.4	of the Pissati
Pontikoi	Ποντικοὶ	HPVIII.IV.3	Pontus
purinos	πύρῖνος	LS	(adj) wheaten?
purnon	πύρνον	LS	whole meal?
puros	πῦροσ	LS	in some dialects spuros
Selinousios	Σελινούσιος	CPIII.21.2	Selinus in Sicily
Sikeloi	Σικελοί	HPVIII.IV.3	Sicilian
sitanias	σιτανίας	HPVIII.II.3	a branching type
sitikos	σῖτικος	LS	(adj) wheaten?
sition	σιτίον	LS	translated as 'dry food'
sitode	σιτώδη	HPVIII.VI.5	translated as 'cereals'
sitos	σῖτοσ	LS	comprehending both barley and wheat
Solois	Σόλοισ	HPVIII.VIII.2	Soli in Cilicia
steleggias	στλεγγίας	CPIII.21.2	a kind of wheat
stleggus	στλεγγύς	HPVIII.IV.3	possibly siligo
Thettalia	Θετταλᾳ	HPVIII.X.4	Thessaly
Thrakes	θρᾷκεσ	HPVIII.IV.3	Thrace
tiphe	τίφη	LS	dryland rice?
trimenon	τρίμηνον	LS	borne after 3 months
zeia	ζειά	LS	1 or 2 seeded

Table 8.2
List of Greek wheat epithets.

LATIN epithet	Passage Ref.	Notes
ador	LS	earlier epithet for '*far*'
alica	LS	also a preparation (e.g. groats, a drink)
Alexandrinum	NHXVIII.XII.68	especially white
arinca	LS	Gallic, possibly rye and also indentified as '*olyra*'
bimestris	LS	reaped 2 months after sowing
brace	LS	Gallic equivalent to '*scandula*'
centigranium	NHXVIII.XX.95	one hundred grain wheat (a '*triticum*')
Clusium	RRII.VI.1	Clusi
Cyprium	NHXVIII.XII.68	Cyprus
dracontion	LS	serpent like?
far	LS	late syn. for '*ador*'
Galliae	NHXVIII.XII.66	the lightest wheat imported to Rome
halicastrum (alicastrum≈alica)	RRII.IX.8	three month type?
Hispaniae	NHXVIII.XII.68	used in beer
Italiae	NHXVIII.XII.68	white
Laconica	NHXVIII.XX.93	the only '*far*' with an awn
oly(u)ra	LS	also '*arinca*'
puroi	MMII.107	context-medication
ramosus	NHXVIII.XX.95	branched wheat (a '*triticum*')
robus	RRII.VI.1	rudy colored '*far*'
scandula	LS	alternate spelling '*sandula*'
Selinusium	NHXVIIII.XII.64	Sicily
sitanium	MMII.107	of the summer
siligo	LS	a wheat or a flour
spelta	LS	equivalent to '*scandula*'
speudias	NHXVIII.XII.65	scanty, light and fast
spica	Vol.25.191A	Panonnian equivalent to 'spelta'
tiphe	LS	rice wheat?
trimestre	LS	three month type
triticum	LS	wheat or wheat type
venuculum	RRII.VI.1	a '*far*'
verna	NHXVIII.VIII.49	spring grain or groats wheat i.e. '*alica*'
zea	LS	Greek?

Table 8.3
List of Latin wheat epihets.

Greek epithet / operative or morphological character	glumes	free threshing	place name	fall/winter sown	spring sown	2 month	3 month	early habit	cold hardy	cold sensitive	wet tolerant	wet intolerant	heat tolerant	singled grained	double grained	single haulmed	multi haulmed	thick haulmed	long haulmed	branched	awnless	awned	white	dark	light	heavy	bright	specified growth stage	uneven ripening	high fertility requirement	low fertility requirement	disease susceptability	sown in husk	sown as 2nd crop	darnel free	grazed	maslin	perrenial habit	insects	stored in the ear	stored out of the ear	mutates	traded/marketed	name for product	dehusked with heat	used for groats	coarse textured	par boiled	used in bread	used for flour	used in unsifted flour	used in wafer flour	used to make leaven	used to make beer	used to make starch		total
Agyptios			x																																x																						2
Aineian			x																							x		x																													3
Akragantinos			x																																x																						2
Alexandros			x																																																						1
Assyrioi			x																																																						1
Babylona			x																																																						1
Biotos			x																																																						1
dimenoi						x																																																			1
Drakontias			x															x												x																											3
Elateian			x																																																						1
Euboian			x				x																																																		2
kamakian																																																									0
kaxrudias	x																													x																											1
krithanias									x																												x																				2
Lakonikei		?	x				x									x																																									3
Libykoi			x										x					x										x		x		x																									6
olura	x													x																x																	x										3
Phocida			x																																																						1
Pissangais			x																x																																						2
Pontikoi			x				x		x							x			x						x										x																						7
purinos	x																																																								0
purnon																																																			x						1
puros	x						x		x															x	x	x				x						x		x	x			x			x				x	x				x			14
Selinousios			x																																																						1
Sikeloi			x													x									x										x																						4
sitanias																	x																																								1
sitikos																																								x																	1
sition																																															x										1
sitode				x																								x																													2
sitos	x	x																										x		x	x	x							x			x	x						x	x							10
Solois																																																									0
steleggias																		x												x																											2
stleggus																																																									0
Thettalia			x																																																						1
Thrakes	x		x																																																						1
tiphe														x														x																		x											3
trimenon							x																																																		1
zeia	x							x						x	x																	x										x					x										6
total	7	1	19	1	0	1	5	1	3	0	0	0	1	3	1	3	1	3	2	0	0	0	0	1	3	2	0	5	0	7	1	3	0	0	4	1	1	1	2	1	0	3	1	0	1	1	3	0	2	2	1	0	0	1	0	0	

Table 8.4
List of operative and morphological characters associated with each Greek wheat epithet .

Latin epithet / operative or morphological character	glumes	free threshing	place name	fall/winter sown	spring sown	2 month	3 month	early habit	cold hardy	cold sensitive	wet tolerant	wet intolerant	heat tolerant	singled grained	double grained	single haulmed	multi haulmed	thick haulmed	long haulmed	branched	awnless	awned	white	dark	light	heavy	bright	specified growth stage	uneven ripening	high fertility requirement	low fertility requirement	disease susceptability	sown in husk	sown as 2nd crop	darnel free	grazed	maslin	perrenial habit	insects	stored in the ear	stored out of the ear	mutates	traded/marketed	name for product	dehusked with heat	used for groats	coarse textured	par boiled	used in bread	used for flour	used in unsifted flour	used in wafer flour	used to make leaven	used to make beer	used to make starch		total
ador	x										x																	x																													3
alica	x				x																																							x		x		x		x							6
Alexandrinum			x																				x																										x								3
arinca																																																									0
bimestris						x																																																			1
brace	x																																																								1
centigranium	x																																																								1
Clusium			x																				x				x																														3
Cyprium			x																					x																																	2
dracontion																		x																																							1
far	x			x					x		x		x								x	x						x			x		x				x		x	x	x				x				x								16
Galliae			x																																																		x				2
halicastrum	x						x																																																		2
Hispaniae			x																						x																								x				x	x			5
Italiae			x																				x			x																															3
Laconica			x																		x	x																																			3
oly(u)ra	x																																																								1
puroi																																																	x								1
ramosus																				x																																					1
robus		x																								x	x																															3
scandula	x																									x	x																						x								4
Selinusium			x															x													x																										3
sitanium							x																																																		1
siligo		x		x						x	x	x	x								x		x		x				x		x											x							x	x					x		15
spelta	x																														x																										2
speudias																																																									0
spica	x																																																								1
tiphe																																																									0
trimestre		x			x		x																								x			x															x				x		x		8
triticum		x		x	x		x				x	x									x		x	x	x	x	x	x		x	x									x	x							x	x	x				x			21
vennuculum	x																						x	x		x																															4
verna					x																																																				1
zea	x													x	x																															x			x	x							6
total	12	4	8	3	4	1	4	0	1	1	4	2	2	1	1	0	0	2	0	1	4	2	6	3	3	5	4	3	1	1	6	0	1	1	0	0	1	0	1	2	2	1	0	1	1	2	0	2	9	4	0	0	3	2	2	0	

Table 8.5
List of opertative and morphological characters associated with each Latin wheat epithet .

Abbreviations used to designate broad cereal categories in the appendix

Abbreviation	Item
w. oat lem	Wild *Avena* lemma base
c. oat lem	Cultivated *Avena* lemma base
oat gr	*Avena* grain
bar rach	*Hordeum* rachis
bar gr	*Hordeum* grain
rye gr	*Secale* grain
ftw rach	*T. aestivum/durum* rachis
ftw gr	*T. aestivum/durum* grain
spt glm	*T. spelta* glume base
spt gr	*T. spelta* grain
em glm	*T. dicoccum* glume base
em gr	*T. dicoccum* grain
ein glm	*T. monococcum* glume base
ein gr	*T. monococcum* grain
Trit gr	*Triticum* sp. grain

Abbreviations used to designate chronological phases

Country	Abbreviation	Phase
BRITAIN	EI	Early Iron Age
" "	MI	Middle Iron Age
" "	LI	Late Iron Age
" "	ER	Early Roman
" "	MR	Middle Roman
" "	LR	Late Roman
FRANCE	HA	Hallstatt ancienne
" "	HF	Hallstatt Final
" "	LA	La Tene ancienne
" "	LM	Middle La Tene and the first half of the La Tene Final
" "	Lf	The second half of the La Tene final
" "	LF	La Tene D2 - Early Gallo Roman
" "	GR	Gallo Roman precoce
" "	RJ	Julio Claudian
" "	RF	Flavian
" "	RA	Antonine
" "	RZ	Mid 3rd-5th century AD
GERMANY	HC	Hallstatt C
" "	HD	Hallstatt D
" "	LA	La Tene A
" "	LB	La Tene B
" "	LC	La Tene C
" "	LD	La Tene D
" "	ER	Early Roman
" "	MR	Middle Roman
" "	LR	Late Roman
GREECE	PG	Protogeometric
" "	G	Geometric
" "	A	Archaic
" "	C	Classical
" "	H	Hellenistic
" "	R1	Roman 1 (150BC-0AD)
" "	R2	Roman 2 (0AD-5th century AD)
ITALY	9BC	9th century.BC
" "	8BC	8th century BC
" "	7BC	7th century BC
" "	6BC	6th centuryBC
" "	5BC	5th century BC
" "	4BC	4th century BC
" "	3BC	3rd century BC
" "	2BC	2nd centuryBC
" "	1BC	1st century BC
" "	1AD	1st centuryAD
" "	2AD	2nd centuryAD
" "	3AD	3rd century AD
" "	4AD	4th century AD
" "	5AD	5th century AD
THE NETHERLANDS	EI	Early Iron Age
" "	MI	Middle Iron Age
" "	LI	Late Iron Age
" "	ER	Early Roman
" "	MR	Middle Roman
" "	LR	Late Roman
SWITZERLAND	L1	La Tene 1
" "	L2	La Tene 2
" "	L3	La Tene 3
" "	EI	Early Iron Age
" "	MI	Middle Iron Age
" "	LI	Late Iron Age
" "	ER	Early Roman
" "	MR	Middle Roman
" "	LR	Late Roman

Number of cereal items at each site in Britain

Site	Phase	w. oat iem	c. oat iem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	eln glm	eln gr	Trit gr	N
Abingdon	EI-LI	0	0	0	0	580	0	0	223	0	717	0	36	0	0	783	5
Abingdon	ER-LR	4	0	0	0	284	0	0	1	0	128	0	1	0	0	356	7
Aston Mill Farm	MI	0	0	1	0	3012	0	0	0	0	0	130	18	0	0	11	17
Baleshare	MI	0	0	0	0	868	0	0	0	0	0	0	2	0	0	0	5
Baleshare	MI-LI	0	0	0	0	689	0	0	0	0	0	0	1	0	0	0	6
Bierton	LI	0	0	92	5	173	1	3	3	30	0	0	0	0	0	532	10
Bierton	ER-LR	0	0	4	0	8	0	0	0	23	0	0	0	0	0	52	2
Carmarthen	ER-LR	6	0	37	34	97	4	0	2	101	121	4	27	0	0	59	32
Catsgore	ER-LR	37	0	24	0	6	0	2	3	2040	551	39	13	10	0	0	9
Chalk	ER-LR	1	0	4	0	120	0	0	0	0	171	0	0	0	0	9	1
Chester House	LI	4	0	0	40	31	0	0	0	4	3	49	0	0	0	7	10
Colchester	ER	0	0	1	0	23	0	0	0	27	0	0	0	0	0	4093	26
Coney St, York	ER	0	0	9	0	582	30	0	0	0	1370	0	0	0	0	23	2
Danebury	EI	0	0	0	45	158	0	4	0	1674	214	35	4	0	0	0	15
Danebury	EI-LI	0	0	0	0	44	0	0	1	44	297	0	0	0	0	0	1
Danebury	MI	0	0	0	4	82	0	0	3	288	147	6	5	0	0	0	7
Danebury	MI-LI	0	0	0	3	17	0	0	0	53	18	0	0	0	0	0	2
Deansway	ER-MR	0	0	38	2	16	4	0	0	1721	39	398	7	0	0	856	14
Dod Law West	MI-ER	0	0	15	569	1040	0	0	0	54	17	324	10	0	0	41	11
Dragonby	LI	0	0	0	0	90	0	0	3	37	20	0	0	0	0	71	20
Dragonby	LI-ER	0	0	0	0	81	0	2	10	30	40	0	0	0	0	67	22
Dragonby	ER-MR	0	0	0	2	80	0	2	1	44	30	0	0	0	0	53	27
Dunston's Clump	LI-MR	3	0	121	3	2220	161	0	34	602	315	12	10	0	0	496	23
Gamston	LI-ER	0	0	0	7	55	0	3	0	452	3	2	0	0	0	145	7
Half Penny Ln.	MI	0	0	1	15	40	0	0	0	723	24	2	2	0	0	2	2
Half Penny Ln.	ER-LR	0	0	0	2	21	0	0	0	27	5	0	1	0	0	0	1
Hornish Point	EI-MI	0	0	0	0	4026	0	0	0	0	0	0	0	0	0	29	8
Hornish Point	EI-LI	0	0	0	0	214	0	0	0	0	0	0	0	0	0	1	1
Hornish Point	MI	0	0	0	0	2033	0	0	0	0	0	0	0	0	0	0	10
Ilchester	ER	1	3	2	1	5	0	0	0	2168	0	17	0	0	0	258	14
Ilchester	ER-MR	0	0	0	0	0	0	0	0	104	0	383	0	0	0	14	2
Ilchester	ER-LR	2	0	3	7	7	0	0	0	1649	0	9	0	0	0	152	10
Ilchester	LR	0	0	0	1	2	0	0	0	372	0	303	0	0	0	27	3
London Forum	ER	13	0	7	0	179	0	0	224	880	6318	53	105	26	46	666	1
London Waterfr	ER-MR	45	0	151	0	416	0	0	450	710	3207	0	2348	0	0	2083	1
Maiden Castle	EI	0	0	0	0	2	0	0	0	10	0	0	0	0	0	2	1
Maiden Castle	LI	0	0	2	35	234	0	0	0	4964	46	0	0	0	0	92	39
Maiden Castle	ER	0	0	0	0	29	0	0	0	46	1	0	0	0	0	17	5
Mingies Ditch	MI-LI	0	0	8	1075	596	0	0	1	918	5	3	0	0	0	70	10
Murton	LI	0	0	0	106	141	0	0	0	26	2	51	2	0	0	6	10
Old Shifford Farm	LI-ER	0	0	20	3	31	0	0	0	54	5	0	0	0	0	17	12
Ounces Barn	ER-LR	0	0	9	1	24	0	0	0	55	123	0	0	0	0	9	16
Poundbury	EI-LI	0	0	41	0	277	1	0	1	70	45	1	17	0	0	468	60
Poundbury	ER	0	0	1	0	2	0	0	0	0	0	0	0	0	0	3	1
Poundbury	MR-LR	0	0	0	0	4	1	0	0	0	13	0	0	0	0	3	2
Poundbury	LR	0	0	0	0	7	0	0	4	0	1	0	0	0	0	7	4
Rock Castle	LI	4	0	0	57	144	0	125	1	574	74	1	0	0	0	74	23
South Shields	LR	0	0	0	5	303	0	0	6257 ✓	593	8481	0	0	0	0	18507	66
Stanwick	LI-ER	4	0	0	40	486	0	0	0	266	51	0	0	0	0	63	32
Thornbrough	LR	0	0	0	35	1989	50	0	0	1097	625	10	0	0	0	66	21
Thorpe Thewles	EI-LI	3	0	0	52	231	0	0	0	310	19	1	0	0	0	18	9
Thorpe Thewles	MI-LI	1	0	0	96	238	0	0	0	765	59	1	1	0	0	68	40
Thorpe Thewles	LI-ER	2	0	0	133	368	0	0	0	1516	106	1	0	0	0	91	57
Thorpe Thewles	ER	1	0	0	2	56	0	0	0	294	32	0	0	0	0	29	12
Viables Farm	EI-LI	0	0	0	0	210	0	0	0	1460	1690	0	180	0	0	20	5

Number of cereal items at each site in Germany

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Archsum	ER	0	0	0	0	540	0	0	69	0	0	0	0	0	0	0	9
Archsum	MR	0	0	0	0	588	0	0	0	0	0	0	0	0	0	0	6
Archsum	MR-LR	0	0	0	0	637	0	0	0	0	0	0	0	0	0	0	7
Bad Dürkheim	MR-LR	0	0	0	0	427	170	0	1786	140	145	64	80	17	82	111	4
Bentumersiel	ER	0	0	0	0	5	0	0	0	0	0	38	0	0	0	0	1
Bergheim	HD	2	0	5	30	24	0	0	0	47	5	55	4	0	0	51	9
Bondorf	LA	0	0	0	0	218	41	0	13	4	199	0	15	0	15	65	1
Bondorf	ER	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	1
Bondorf	MR	0	0	5	0	2	74	0	4	653	3183	32	65	0	16	0	1
Boomborg/Hatzum	HC-LD	0	0	0	3	204	0	0	1	0	0	0	3	0	0	0	1
Flögeln	ER	0	0	10	0	114	0	0	4	0	0	0	3	0	0	0	2
Flögeln	MR	0	0	13	0	65	715	0	8	0	0	0	5	0	0	1	10
Flögeln	LR	0	0	334	0	2827	4488	0	1	0	0	0	3	0	0	1	15
Hardthausen - Lampoldshausen	MR-LR	0	0	0	0	0	8100	0	0	0	0	0	0	0	0	0	1
Köln	HC-HD	0	0	4	0	417	0	0	19	150	11	169	131	0	1	0	45
Köln	HD-LA	0	0	2	0	14	0	0	0	0	0	12	9	0	0	0	4
Künzing	MR	0	0	31	10	400	35	0	23	520	1106	8	51	0	5	572	27
Lahr Dinglingen	MR	0	0	20	0	46	11	0	15	589	42	19	16	0	1	11	1
Mainz Lotherpassage	ER-LR	0	0	0	0	8	0	0	13	0	3	0	0	0	0	5	2
Manching	LD	0	0	0	8	57	0	0	0	468	4	26	5	108	2	0	65
Mühlheim-Stetten	LR	0	0	38	0	61	3	0	7	1	34	0	0	1	4	10	1
Neuss	ER	533	31	6583	65	105284	215	0	34143	1894	16967	861	11413	0	1127	22420	57
Niederlbach	HD-LA	0	0	24	116	6789	12	0	140	1464	336	44	173	28	25	683	38
Riedlingen/Klinge	LA-LB	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	1
Schwennenz20	MR-LR	0	0	29	0	293409	95	0	398	0	0	2	3	0	0	506	5
Steinbühl	LC-LD	0	0	17	1	67	19	0	438	305	259	283	220	0	1	0	74
Welzheim	MR-LR	0	0	21	0	106	169	0	259	48	5171	13	10	0	13	0	5
Xanten	ER	0	6	139	2	3086	0	0	153	2959	1306	6258	87	0	3	6	23
Xanten	ER-MR	0	0	0	0	0	0	0	0	30	0	113	0	0	0	0	6
Xanten	MR	0	0	1	2	6	0	0	0	1	0	6	0	0	0	0	2
Xanten	MR-LR	0	21	102	39	208	0	0	4	1182	2000	707	2002	0	4	0	10
Xanten	LR	0	0	2	0	18	0	0	1	16	4	337	3	0	0	0	5

Number of cereal items at each site in France

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Acy-Romance "La Warde"	LM	0	0	0	0	650	0	0	0	44	260	0	0	2	71	0	4
Amiens "Zac Cathedrale"	RJ-RZ	0	0	0	16	1012	0	10	220	3290	9900	0	0	352	224	0	60
Attilly	GR	0	0	0	0	4	0	0	0	0	0	794	67	0	0	0	4
Attilly	RF-RA	0	0	0	0	1	0	0	0	0	0	4	45	0	0	0	2
Bailly	LA	0	40	0	3	442	0	6	198	0	0	230	821	0	0	0	39
Bazoches-Sur-Vesle "Les Chantraines"	LM-Lf	0	0	0	0	206	0	0	82	0	0	10	169	0	0	0	17
Bazoches-Sur-Vesle "Les Chantraines"	RJ-RZ	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Betheny	LM	0	0	0	0	8408	0	0	1	0	0	26	2069	54	278	0	45
Bucy-Le-Long "Le Grand Marais"	HF-LA	0	0	0	0	83	0	0	81	8	9	6	0	0	0	10	8
Bussy-St-Georges "Le Champ Fleuri Nord"	LA	0	0	0	1	140	0	0	94	0	0	372	389	0	0	0	16
Cagny "Ferme de L' Epinette"	RF-RZ	0	0	0	0	6	0	0	43	42	80	0	0	0	0	46	7
Cairon	LM-Lf	0	0	0	0	6	0	0	0	0	0	4	34	0	0	1	7
Chambly "La Marnière"	LF	0	0	0	0	3965	0	0	385	26	439	0	2	0	0	0	1
Changis-Sur-Marne "Les Pétreaux"	HF	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
Changis-Sur-Marne "Les Pétreaux"	LA	0	0	0	0	152	0	0	3	0	0	6	35	0	0	0	4
Ciry-Salsogne "Le Bruy"	LM	0	0	0	0	0	0	0	0	0	0	136	0	0	0	0	2
Cizancourt	LA-LM	0	0	0	0	3	0	0	6	0	0	8	666	0	0	0	2
Compans "Ouest du Parc"	RZ	20	0	0	0	4	0	0	79	0	0	0	0	0	0	0	2
Conchil Le Temple "La Commanderie"	RJ	0	0	4	18	59	0	0	37	0	4	24	185	0	0	0	20
Conchil Le Temple "La Commanderie"	RJ-RF	0	0	0	0	0	0	0	0	0	0	6	0	0	0	17	2
Conchil Le Temple "La Commanderie"	RF	0	0	0	0	0	0	0	0	0	0	48	6	0	0	0	1
Conchil Le Temple "La Commanderie"	RF-RA	0	0	0	0	23	0	0	67	10	0	294	391	0	0	239	12
Courdimanche "Le Fief à Cavan"	RZ	0	0	0	0	2	0	0	161	0	0	0	0	0	0	8	7
Crevéchamps "Tronc du Chêne" et "Sous Vesle"	HA	0	0	0	0	9	0	0	0	0	0	0	12	0	0	1	6
Crevéchamps "Tronc du Chêne" et "Sous Vesle"	HF-LA	0	0	0	0	28	0	0	0	0	1	0	7	0	0	3	10

Number of cereal items at each site in France

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Dury "Le Camp Rolland"	RF-RA	0	0	0	0	9	0	0	0	0	0	0	0	0	2	7	1
Eaucourt	RF-RZ	0	0	0	0	12	0	0	90	4	0	108	512	0	0	6	12
Ennemain_A	GR-RZ	0	0	0	0	2	0	0	65	0	8	338	4770	0	0	0	6
Ennemain_B	GR-RZ	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Forest Monthiers "Le Fond de Bernay"	LM-Lf	0	0	0	0	2	0	0	1	20	0	244	399	0	0	0	3
Ham "Le Bois aux Cailloux"	LM	4	0	29	0	42	0	0	1	0	0	20	29	0	0	0	1
Herblay "Gaillon le Bas"	HF-LA	0	0	0	0	28	0	0	2	0	0	12	13	0	0	6	6
Herleville	LA	0	0	0	0	2	0	0	0	0	0	0	1	0	0	1	2
Houdan "Les Brosses"	GR-RZ	0	1	65	8	4384	0	1793	46250	0	0	0	10	0	0	0	6
Jaux "Le Camp du Roi"	LM	0	0	0	0	829	0	0	0	0	0	742	12282	0	0	0	8
Jouars Ponchartrain "La Ferme d' Ithe"	RJ	0	0	0	0	126	2	1	626	0	0	2	6	0	0	0	4
Jouars Ponchartrain "La Ferme d' Ithe"	RF-RA	0	0	0	0	1	73	0	1	0	0	0	0	0	0	0	2
Jouars Ponchartrain "La Ferme d' Ithe"	RZ	0	0	0	0	2	57	0	0	0	0	0	2	0	0	0	6
La Croix Saint Ouen "Les Longues Rayes"	LA	0	0	0	0	13	0	0	6	0	16	2	10	0	0	9	23
Lime "La Prairie"	LA	0	0	0	0	3	0	0	0	0	0	0	12	0	0	0	6
Longueuil-Sainte-Marie "Le Vivier_des Gres"	HA-HF	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	2
Longueuil-Sainte-Marie "Le Vivier_des Gres"	LM	0	0	22	0	1149	0	0	41	0	0	0	375	0	0	0	19
Louvres "Le Vieux Moulin"	LM	0	0	72	0	11415	0	0	148	0	0	148	629	0	0	0	40
Maisnil-lès-Ruitz "Chemin de Lens"	LA-LF	0	35	119	0	75	0	0	0	0	0	196	1029	0	0	0	5
Marolles Sur Seine "Le Chemin de Sens"	RZ	0	0	0	0	3	0	0	515	0	0	0	15	0	0	0	1
Mauregard "Echelle Haute"	LA-LM	0	0	22	0	399	4	0	1	0	0	450	70	0	12	0	5
Mauregard "La Fossette"	RF-RA	0	0	0	0	0	0	0	20	0	0	0	12	0	0	13	4
Mauregard "La Fossette"	RA	0	0	0	0	4	1	0	26	0	0	0	5	0	0	7	3
Mauregard "La Fossette"	RJ-RZ	0	0	0	0	0	0	0	29	0	0	10	1	0	0	0	4
Melun "Palais de_ Justice: Zac Gruber"	RF-RZ	0	0	0	0	117	26	0	85	0	0	0	13	0	0	50	49

Number of cereal items at each site in France

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Oroer "Sous le Bois Saint-Martin"	RZ	0	0	0	0	0	0	0	6	100	118	2	5	0	0	0	6
Paris "Rue Pierre et Marie Curie"	RJ-RF	0	0	0	0	1	0	0	82	0	0	0	0	0	0	0	2
Pont-Sainte Maxence "Le Jonquoire"	LF-RJ	0	0	0	0	0	0	0	401	0	5	0	0	0	0	0	6
Pont Rémy "La Queute et Le Fond Baraquin"	HF	0	0	0	17	25	0	0	0	0	0	0	0	0	0	0	1
Pont Rémy "La Queute et Le Fond Baraquin"	LA-LM	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	2
Pont Rémy "La Queute et Le Fond Baraquin"	LM-Lf	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Rouen "Place-Foch"	RJ	0	0	0	0	3	2	0	0	2	0	0	0	0	0	0	3
Rouen "Place-Foch"	RF	0	0	0	0	13	1	0	1	0	0	2	0	0	0	0	3
Rouen "Place-Foch"	RF-RA	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Rouen "Place-Foch"	RZ	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Rouen "Théatre des Arts"	RF	0	0	25	0	166	0	0	0	0	0	0	0	0	0	0	1
Roye "Le Puits à Marne"	RZ	0	0	0	0	0	0	0	82	0	0	0	6	0	0	138	2
Saint Gibrien "Le Dessus du Vieux Pont"	LA-Lf	0	0	35	0	481	1	0	2	0	3	0	180	0	2	0	6
Sermoise Les Prés du Bout de la Ville"	HF-LA	0	0	0	0	84	0	77	0	0	0	86	26	0	0	1	3
Sorrus "La Pâture á Vaches"	LM-Lf	0	0	3	0	3	0	0	0	0	0	0	7	0	0	0	2
Tagnon "La Fricassée"	LA	0	0	0	0	4848	0	0	0	8	10	1008	4778	0	18	0	8
Thaon	LA-Lf	0	0	0	0	601	0	0	0	96	564	54	722	0	0	0	15
Tremblay "Le Nouret"	LA-RZ	0	0	7	0	34	1	0	39	0	0	0	8	0	0	3	19
Tremblay "Le Nouret"	RJ	0	0	5	0	4254	1	0	16	0	0	0	5	0	0	8	7
Tremblay "Le Nouret"	RJ-RF	0	0	0	0	6	0	14	3	0	0	0	0	0	0	0	5
Tremblay "Le Nouret"	RA	0	0	0	0	3	0	0	5	0	0	0	0	0	0	3	1
Tremblay "Le Nouret"	RZ	0	0	6	0	40	4	0	178	0	0	0	1	0	0	1	8
Villers Vicomte- "La Rosière"	RF-RA	0	0	0	0	6	0	78	1495	0	0	0	3	0	0	0	6

Number of cereal items at each site in The Netherlands

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Aardenburg	MR	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	1
Abbenbroek 17-22	LI	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1
Alphen a/d Rijn-Rijksweg 11 (locatie 3)	ER-MR	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Alphen Aan Den Rijn-julianastraat	ER-MR	0	0	0	1	2	0	0	0	0	1	0	0	0	0	0	2
Assendelver Polders site c	ER-MR	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	1
Assendelver Polders site d	MR-LR	0	0	0	1	3	0	0	0	2	0	0	0	0	0	0	2
Assendelver Polders site f	LI-LR	0	0	50	3	1841	0	0	0	0	0	0	3	0	0	0	2
Assendelver Polders site h	ER-MR	0	0	1	0	182	0	0	0	0	0	0	0	0	0	0	2
Assendelver Polders site k	LI-ER	0	0	1	1	435	0	0	0	0	0	0	1	0	0	0	1
Assendelver Polders site p	ER-MR	0	0	486	94	2860	0	0	0	0	0	0	0	0	0	0	2
Borculo	LI	0	0	5	0	2306	0	0	0	0	0	0	12	0	0	0	1
Bunnik-Singel West	MI	0	0	0	0	12	0	0	0	0	0	0	1	0	0	0	4
Bunnik-Vechten Castellum	MR	0	0	0	0	4	0	0	0	0	0	1	0	0	0	0	3
Castricum-Oosterbuurt	MR-LR	0	0	0	29	23	0	0	0	0	0	0	0	0	0	0	6
Cuijk-Havenlaan	LR	0	0	3	0	4	0	0	1	1	0	0	0	0	0	0	1
Cuijk-Nielt	LR	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Dalfsen	MR-LR	0	0	15	0	9800	0	0	0	0	0	0	1485	0	0	0	1
Den Haag-Scheveningse Weg-Tempel	MR	0	0	0	0	3	1	0	47	0	0	0	0	0	0	5	10
Dommelen-Kerkakkers ii	MI	0	0	0	2	2	0	0	0	0	0	0	2	0	0	0	4
Duifpolder 11-17 (huis 2)	MI	0	0	0	4	3	0	0	0	0	0	0	0	0	0	0	2
Ede-Veldhuizen	MR-LR	0	0	0	0	5	1100	0	0	0	0	0	0	0	0	0	1
Emst	MI-MR	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1
Enschede-Elferinkse Es	LI	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Geervliet 10-172	MI	0	0	0	0	12	0	0	0	0	0	3	0	0	0	0	2
Geervliet 17-55	MI-LI	0	0	1	16	13	0	0	0	0	0	25	0	0	0	2	3
Geldermalsen-Kalenberg	MI	0	0	0	0	0	0	0	3	0	0	4	2	0	0	0	1
Groesbeek-Klein Amerika	ER	0	0	0	0	6	0	0	0	0	0	0	1	0	0	1	2
Groesbeek-Klein Amerika	MR	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	2
Groningen-Paddepoel	LI-MR	0	0	5	0	19	0	0	0	0	0	0	3	0	0	0	7
Herwen-Rijnwaarden	MI	0	0	133	26	816	0	0	0	0	0	448	432	0	0	0	3
Heveskesklooster	ER-LR	0	0	0	35	16	0	0	0	0	0	0	0	0	0	0	10

Number of cereal items at each site in The Netherlands

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Katwijk-Zanderij	ER-MR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Kesteren-De Woerd	MI	134	0	38	398	145	0	0	0	7	0	2325	1	0	0	58	6
Kesteren-De Woerd	ER	9	0	109	46	130	0	0	0	0	0	454	0	0	0	23	4
Kesteren-De Woerd	ER-MR	6	0	46	129	216	0	0	0	17	0	645	6	0	0	10	5
Kesteren-De Woerd	MR	21	1	207	325	415	0	0	0	59	1	803	40	0	0	63	22
Leeuwarden-Bullepolder	LI	0	0	0	7	1	0	0	0	0	0	0	0	0	0	0	2
Leeuwarden-Bullepolder	ER-LR	0	0	0	3	6	0	0	0	0	0	0	0	0	0	0	3
Leidsche Rijn lr2-1997	MR	3	78	1602	72	6780	0	0	0	0	0	760	4628	0	0	69	9
Lieshout/lierop	MR-LR	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Limmen-Schulpvaart	MR-LR	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Maasbracht-Steenakker	LI	0	0	0	0	1	0	0	0	0	0	16	0	0	0	1	1
Maasbracht-Steenakker	MR-LR	0	0	0	0	3	0	0	1	0	0	5	0	0	0	11	3
Maastricht-Amby	MR-LR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Maastricht-Amby	LR	0	0	0	0	0	0	0	2	8	1	0	0	0	0	0	3
Maastricht-Derlon	ER	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Maastricht-Derlon	LR	0	0	1	1	1	67	0	2	8	1	0	4	0	0	13	8
Maastricht-Houtmaas	MR	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	1
Maastricht-Houtmaas ii	MR	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	2
Maastricht-Pandhof	ER	0	0	0	0	17	1	0	0	23	0	150	0	0	0	0	2
Maastricht-Pandhof	LR	0	0	116	0	1324	296	0	2070	213	8890	0	0	0	21	696	15
Maastricht-Plankstraat 23	ER	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Maastricht-Randwijck ii	EI-MI	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1
Meteren-Lage Blok	MI	0	0	1	24	8	0	0	0	0	0	156	4	0	0	0	13
Middelstum-Boerdamsterweg	EI	9	0	133	355	28585	0	0	0	0	0	105	431	0	0	0	7
Midden-Delfland 11.17 (Maasland)	MI-LI	0	0	0	44	20	0	0	0	0	0	226	1	0	0	0	5
Midden-Delfland 15.04 (Maasland)	MI-LI	0	0	3	157	151	0	3	0	0	0	354	20	0	0	4	26
Midden-Delfland 16.59 (Maasland)	MI-LI	0	0	0	3	0	0	0	0	0	0	9	0	0	0	0	2
Nieuwenhoorn 09-89	ER-MR	2	0	0	1457	174	0	0	0	0	0	70	2	0	0	0	11
Nijmegen-Canisiuscollege	MR	0	0	1	0	0	0	1	450	12	400	0	0	0	0	0	1
Nijmegen-Canisiuscollege ii	ER	0	0	2	0	3	0	0	0	0	0	0	1	0	0	2	1
Nijmegen-Canisiuscollege ii	ER-MR	0	0	9	0	19	0	0	4	0	6	0	4	0	0	15	2
Nijmegen-Kops Plateau	ER	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Noordbarge-Hooge Loo	LI	0	0	62	0	2022	1	0	0	0	0	65	187	0	0	0	10
Noordbarge-Hooge Loo	LI-MR	0	0	22	0	47	409	0	0	0	0	4	59	0	0	0	19
Oirlo-Stokven	LI	0	0	0	0	40	0	0	0	0	0	0	60	0	0	0	1

Number of cereal items at each site in The Netherlands

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Oosterhout	MR	0	0	8	1	35	0	0	0	0	0	0	0	0	0	0	17
Opperdoes	MI-LI	6	0	2	14	349	0	0	0	0	0	5	26	0	0	0	27
Oss-Ijsselstraat-Rom	MR	0	0	0	3	4	0	0	0	0	0	0	1	0	0	0	3
Oss-Schalkskamp	LI	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Oss-Ussen iv	MI	0	0	1	0	2	0	0	0	0	1	0	1	0	0	0	2
Oss-Ussen iv	MI-LI	0	0	1	0	74	0	0	0	0	0	19	15	0	0	0	6
Oss-Ussen iv	LI	0	0	1	23	168	0	0	0	0	1	10	2	0	0	0	10
Oss-Ussen Vijver	ER-MR	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	1
Oss-Ussen Westerveld	ER-MR	0	0	0	0	56	0	0	0	0	14	0	14	0	0	0	1
Ouddorp-Oude Oostdijk	MR	0	0	46	0	17303	0	0	1603	0	3	0	0	0	0	0	2
Ouddorp-Oude Ostdijk Revisited	MR	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Peelo-De Es	MI-LI	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	1
Peelo-De Es	ER-MR	0	0	0	47	1	2	0	0	0	0	0	0	0	0	0	1
Peelo-De Es	MR-LR	0	0	39	5	170	208	0	0	0	0	0	0	0	0	0	12
Peelo-Haverland ii	MI-LI	0	0	0	0	2	0	0	0	0	0	1	1	0	0	0	2
Peins-Oost	LI-ER	0	0	0	26	44	0	0	0	0	0	0	0	0	0	0	10
Peins-Oost	ER-MR	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Raalte-Raan	ER-MR	0	0	4	0	3	0	0	0	0	0	0	1	0	0	0	1
Rockanje 08-52	LI	0	0	0	73	11	0	0	0	0	0	12	0	0	0	0	5
Rockanje 08-53	LI	0	0	0	9	5	0	0	0	0	0	4	0	0	0	0	4
Rockanje 08-54	LI	0	0	0	138	42	0	0	0	0	0	87	1	0	0	0	5
Rockanje ii	MR	0	0	2	237	153	0	0	1	0	0	6	4	0	0	0	7
Rotterdam-Terbregge 06-23	LI	0	0	0	19	3	0	0	0	0	0	17	0	0	0	0	4
Santpoort-Spanjaardsberg	MI-LR	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Schagen-Muggenburg	MR-LR	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	4
Schiedam-Kethel	MR	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Sneek-Nieuwe Jachthaven	ER-MR	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Son en Breugel-Hooidonkse Akkers	MI-LI	0	0	3	8	23	0	0	0	335	0	72	1	0	0	51	9
Spijkenisse 17-30	EI	0	0	0	0	0	0	0	0	0	0	8	45	0	0	0	3
Spijkenisse 17-34	MI-LI	3	0	1	90	29	0	0	0	0	0	627	8	0	0	0	15
Spijkenisse 17-35	EI	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
Spijkenisse 17-35	MI-LI	0	0	0	18	6	0	0	0	0	0	43	0	0	0	0	1
Texel-Den Burg-Beatrixlaan	EI-MI	0	0	0	21	420	0	0	0	0	0	2250	2460	0	16	16	1
Tritsum	MI-MR	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	4
Uitgeest-Floretijnse Veld	MR	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1

Number of cereal items at each site in The Netherlands

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Valkenburg-Castellum i	ER	0	0	223	0	13069	3	0	2860	40	69	160	212	0	0	640	3
Valkenburg-Castellum i	MR	0	0	0	0	0	0	0	1	2	1	2	1	0	0	0	1
Valkenburg-Castellum ii	ER-MR	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	2
Valkenburg-Castellum ii	ER-LR	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1
Valkenburg-Castellum ii	MR-LR	0	0	0	0	0	0	0	1	0	1	0	3	0	0	0	2
Valkenburg-Marktveld ii	ER	0	0	0	0	11515	0	0	8666	0	0	0	0	0	0	0	2
Valkenburg-Marktveld ii	MR	0	0	0	0	38	0	0	0	0	0	0	0	0	0	3	8
Valkenburg-Marktveld iii	MR	0	0	0	4	70	0	0	1	0	0	2	1	0	0	4	14
Vlaardingen-Broekpolder	EI-LI	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Vlaardingen-Hoogstad 6.36	MR	0	0	0	0	14	0	0	0	0	0	2	1	0	0	0	4
Vlaardingen-Kolpabad 6.123	LI	0	0	0	0	15	0	0	0	0	0	1	5	0	0	0	1
Vleuten-Balije	MR-LR	0	0	0	0	2	0	0	0	0	0	6	0	0	0	0	3
Vleuterweide-Wilhelminalaan	MI-LI	0	0	0	0	1	0	0	0	0	0	10	0	0	0	0	1
Voerendaal-Ten Hove	LI-ER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Voerendaal-Ten Hove	ER-MR	0	0	1	0	5	0	3	0	2120	3	406	0	0	0	133	21
Voerendaal-Ten Hove	MR-LR	0	0	8	9	133	0	5	58	84267	3583	2927	35	0	0	3804	79
Wierden-Enter Baanakkers	LI-MR	0	0	13	0	14	8	0	0	0	0	0	11	0	0	0	1
Wijk Bij Duurstede-De Horden	LI-ER	1	3	411	108	1621	0	0	1	0	0	522	193	0	0	0	79
Wijk Bij Duurstede-De Horden	MR	0	2	177	50	667	0	0	2	0	0	126	185	0	0	0	72
Wijnaldum-Tjitsma	MR	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1
Wijnaldum-Tjitsma	MR-LR	0	0	0	2	30	0	0	0	0	0	0	1	0	0	0	5
Wijster	MR-LR	0	0	0	0	250	0	0	0	0	0	0	0	0	0	0	1
Woerden-Hoek Molenstraat/Kazernestraat	ER-MR	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Zuidland 16-15	LI	0	0	0	8	5	0	0	0	0	0	15	0	0	0	1	1
Zuidland 17-27	LI	0	0	2	219	59	0	0	0	0	0	152	0	0	0	26	2

Number of cereal items at each site in Switzerland

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Arconciel	MR-LR	0	1	55	0	1396	0	0	1037	332	24475	5	19	0	27	9293	128
Augst	ER	0	0	78	0	270174	240324	0	325570	7	50119	11	310943	4	120109	91471	69
Augst	ER-MR	0	0	0	0	25	0	0	0	0	0	0	0	0	0	7	8
Augst	LR	0	0	1	3	23	1	56	29	7	4	18	0	0	0	12	21
Balzers Amthaus	MR-LR	0	0	33	1	7	6	0	548	264	1673	36	3	7	0	687	10
Basel-Gasfabrik	L3	0	4	21	28	238	0	0	34	32	16	16	4	38	4	19	103
Basel	L2-L3	0	0	14	29	745	6	0	20	3	5	0	2	0	1	7	3
Basel	ER	0	0	16	29	602	3	1	5	77	62	0	10	3	3	33	7
Biberist	ER	0	1	265	116	4735	1	0	3	40	4	11	0	3	0	8	1
Biberist	MR-LR	0	0	43	55	373	42	0	94	705	167	78	46	0	0	361	7
Chevenez	L1-L3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	13
Cheyres	L2-L3	43	17	554	602	17401	0	0	205	17	14	0	3	0	0	2	14
Kaiser Augst	ER	0	0	1	0	11	875	0	3580	5	523	0	524	0	218	215	14
Kaiser Augst	MR	0	0	0	0	13	4	0	1	0	4	0	0	0	0	0	3
Kaiser Augst	LR	0	0	0	0	7	0	0	0	0	2	0	1	0	4	0	1
Reinach	MR	0	0	0	0	11	0	0	64	4	2	21	0	0	0	42	9
Therwil	L1-L3	0	4	14	12	16	0	147	3639	367	357	62	21	47	17	1359	1
Vindonissa	ER	0	0	13	0	64	5	0	33	534	159	15	10	9	1	187	23

Number of cereal items at each site in Italy

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Acquarossa	7-6BC	0	0	0	0	25	1	0	2	1	0	4	0	5	0	0	1
Castellaro di Uscio	9BC	0	0	0	0	9	0	0	4	0	0	0	0	0	0	30	2
Filattiera-Sorano	2-5AD	0	0	0	0	11	0	0	5967	0	0	0	0	0	0	0	15
House of Amarantus 11-12	6-5BC	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	2
House of Amarantus 11-12	4-3BC	0	0	0	0	9	0	0	0	0	0	4	2	0	0	0	4
House of Amarantus 11-12	4-1BC	0	0	0	0	2	0	0	0	0	0	5	0	1	0	0	3
House of Amarantus 11-12	2BC	0	0	0	0	26	0	0	6	0	0	2	4	0	2	18	6
Ischia	8-7BC	0	0	0	0	5	0	0	2	0	0	0	1	0	0	0	2
Lomello	1-2AD	0	0	0	0	6	655	0	1	0	0	0	2	0	0	0	1
Mezzocorona	2-4AD	0	0	0	0	53	0	0	63	0	0	0	22	0	4	12	12
Monte Bibele	3-2BC	0	0	0	0	0	0	0	47	0	0	0	0	0	0	0	1
Narce	8BC	0	0	0	0	0	0	0	0	0	0	18	50	0	0	1	1
Nave	4BC	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Nave	1BC	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1
Nave	1BC-1AD	0	0	0	0	31	0	0	21	0	0	0	0	0	0	1	7
Oria	4BC	0	0	0	0	429	0	0	437	0	1	0	4	0	9	155	30
Ortu Comidu	5-3BC	0	0	0	0	9	0	0	0	0	0	0	0	0	0	3	1
Roccagloiosa	6-5BC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Roccagloiosa	4BC	0	0	0	0	14	0	0	2	0	0	198	5	0	1	5	4
Roccagloiosa	3BC	0	0	0	0	0	0	0	0	0	0	2	4	0	0	2	1
Rome Setore 9 area 4 and 5	8BC	0	0	0	3	388	0	0	39	25	15	315	812	30	26	1013	1
Rome Setore 9 area 4 and 5	7BC	0	0	0	0	122	0	0	9	51	12	715	145	23	23	203	1
Rome Setore 9 area 4 and 5	6BC	0	0	0	1	18	0	0	2	4	4	36	42	11	3	10	1
Satrianum	4BC	0	0	0	0	0	0	0	0	0	0	0	116	0	0	0	1
Schluderns	1BC	0	0	0	0	1463	0	0	0	0	0	0	0	0	0	0	1
Sirmione Via Antiche 11	2-5AD	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	1
St Omobono	6BC	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Tombs Via Sacra	8-7BC	0	0	0	0	56	0	0	0	0	0	0	78	0	13	0	1
Via Sacra archaic	6-2BC	0	0	0	0	37	0	0	0	0	0	208	31	0	38	58	1
Via Sacra Atrium Vestae	6-2BC	0	0	0	0	62	0	0	0	0	0	134	20	0	22	61	5
Via T Grossi-Mariano Comense	1-2AD	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1

Number of cereal items at each site in Greece

Site	Phase	w. oat lem	c. oat lem	oat gr	bar rach	bar gr	rye gr	ftw rach	ftw gr	spt glm	spt gr	em glm	em gr	ein glm	ein gr	Trit gr	N
Assiros Toumba	G	0	0	0	0	11	0	0	3	0	26	0	314	0	67	25	1
Heraion of Samos	A	0	0	0	0	21	0	0	1	0	0	0	1	0	0	5	5
Iolkos	PG	0	0	0	0	805	0	0	0	0	0	0	0	0	0	0	1
Iolkos	G-A	0	0	7	0	364	0	0	7	0	7	824	223	0	19	355	3
Kastanas	PG	0	0	0	0	1783	0	0	47	0	229	2	333	0	204	0	72
Kastanas	G	0	0	0	0	896	0	0	32	0	97	0	600	0	114	0	104
Kastanas	A-C	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	1
Kastanas	H-R1	0	0	0	0	16	0	0	33	0	0	0	4	0	0	0	1
Lerna	C-H	0	0	0	0	536	0	0	0	0	0	0	51	0	5	0	1
Mesopotamon	PG-A	0	0	0	0	39	0	0	1249	0	0	0	38	0	0	0	3
Nicopolis ad Istrum	R2	0	0	10	6	243	107	8	278	2	0	0	0	0	3	69	38
Nicopolis ad Istrum	R2-5th	0	0	0	0	2	2	0	2	0	0	0	0	0	0	0	4
Sanctuary of Demeter and-Kore	A	0	0	0	0	51	0	0	13	0	0	0	0	0	0	22	3
Sanctuary of Demeter and-Kore	A-C	0	0	0	0	15	0	0	7	0	0	0	0	0	0	6	5
Sanctuary of Demeter and-Kore	C	0	0	0	0	13	0	0	4	0	0	0	0	0	0	6	7
Sanctuary of Demeter and-Kore	C-R2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1

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