

## Composition of Ludlow shelly faunal associations - 1

Ludlow shelly faunal associations	Anthozoa	syringoporiid	solitary trochoid corals	<i>Rhabdocyclus porpitoideus</i>	<i>Favosites cf. forbesi</i>	Bryozoa	Brachiopods	<i>Aegiria grayi</i> *	<i>Dicoelosia biloba</i>	<i>Glassia obovata</i>	<i>Leangella segmentum</i>	<i>Lingula lata</i>	<i>Ludfordina paxiis</i>	<i>Nucleospira pisum</i>	<i>Parastrophinella</i> sp.	<i>Plagiorhynchia</i> sp.	? <i>Protozeuga</i> sp.	<i>Reserella sabrinae nunfieldensis</i>	<i>Cyrtia exprorecta</i>	<i>Protochonetes minimus</i>	<i>Skenidioides lewisii</i>	<i>Dalejina hybrida</i>	<i>Schuchertella</i> sp.	<i>Amphistrophia funiculata</i>	<i>Eospirifer radiatus</i>	<i>Gypidula lata</i>	<i>Mesopholidostrophia laevigata</i>	<i>Strophonella euglypha</i>	<i>Leptaena depressa</i>	<i>Shagamella minor</i>
<i>Protochonetes ludloviensis</i> Association						x																								
<i>Shaleria ornatella</i> Association						x																							x	x
<i>Sphaerirhynchia wilsoni</i> Association (upper phase)			x			x																							x	x
<i>Atrypa reticularis</i> -coral Association			x			x																			x	x	x	x	x	x
<i>Kirkidium knightii</i> Association			x			x																		x	x	x	x	x	x	x
<i>Sphaerirhynchia wilsoni</i> Association (lower phase)			x	x	x	x																x	x	x	x	x	x	x	x	x
<i>Mesopholidostrophia laevigata</i> Association		x	x	x		x													x	x	x	x	x	x	x	x	x	x	x	x
<i>Glassia obovata</i> Association		x	x			x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Data are from Watkins 1979, tables 15 and 16. The data show the total faunal content of each association, but give no indication of variability within each association. Not all species will be present in any fauna assigned to an association, however, so 'total faunal content' should not be taken as a fixed definition of that association. \**Aegiria grayi* was listed by Watkins as occurring in the *Glassia obovata* Association, in which it is the most abundant brachiopod. It also occurs higher in the type Ludlow Series, however, for example in the Upper Leintwardine Formation (*Shaleria ornatella* Association).

Watkins, R. 1979. Benthic community organization in the Ludlow Series of the Welsh Borderland. *Bulletin of the British Museum* (Natural History), Geology, **31**, 175-280.

See: '[Glassia obovata Association - Fauna](#)', '[Mesopholidostrophia laevigata Association - Fauna](#)', '[Sphaerirhynchia wilsoni Association \(lower phase\) - Fauna](#)', '[Kirkidium knightii Association - Fauna](#)', '[Atrypa reticularis-coral Association - Fauna](#)', '[Sphaerirhynchia wilsoni Association \(upper phase\) - Fauna](#)', '[Shaleria ornatella Association - Fauna](#)', '[Protochonetes ludloviensis Association - Fauna](#)'.

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## Composition of Ludlow shelly faunal associations - 2

Ludlow shelly faunal associations	Brachiopods (continued)																									
	<i>Atrypa reticularis</i>	<i>Craniops implicatus</i>	<i>Dayia navicula</i>	<i>Howellella elegans</i>	<i>Isorthis clivosa</i>	<i>Leptostrophia filosa</i>	<i>Lingula lewisii</i>	<i>Orbiculoidea rugata</i>	<i>Delthyris</i> sp.	<i>Gasconsia</i> sp.	<i>Meristina obtusa</i>	<i>Resserella</i> sp.	<i>Rhynchospirina</i> sp.	<i>Kirkidium knightii</i>	<i>Coolinia pecten</i>	<i>Microsphaeridiorhynchus nucula</i>	<i>Protochonetes ludloviensis</i>	<i>Shaleria ornatella</i>	<i>Sphaerirhynchia wilsoni</i>	<i>Hyattidina canalis</i>	<i>Isorthis orbicularis</i>	<i>Salopina lunata</i>	<i>Dolerorthis</i> sp.			
<i>Protochonetes ludloviensis</i> Association	x	x	x	x	x	x	x	x								x	x	x	x			x				
<i>Shaleria ornatella</i> Association	x		x	x	x	x	x	x								x	x	x	x	x	x	x				
<i>Sphaerirhynchia wilsoni</i> Association (upper phase)	x	x	x	x		x	x	x								x	x	x	x	x	x	x	x			
<i>Atrypa reticularis</i> -coral Association	x			x			x	x							x	x	x	x	x	x	x					
<i>Kirkidium knightii</i> Association	x		x	x	x	x	x							x					x							
<i>Sphaerirhynchia wilsoni</i> Association (lower phase)	x	x		x		x	x	x					x	x	x	x	x	x	x	x	x	x				
<i>Mesopholidostrophia laevigata</i> Association	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x							
<i>Glassia obovata</i> Association	x	x	x	x	x	x	x	x	x																	

Data are from Watkins 1979, tables 15 and 16. The data show the total faunal content of each association, but give no indication of variability within each association. Not all species will be present in any fauna assigned to an association, however, so 'total faunal content' should not be taken as a fixed definition of that association.

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See: '[Glassia obovata Association - Fauna](#)', '[Mesopholidostrophia laevigata Association - Fauna](#)', '[Sphaerirhynchia wilsoni Association \(lower phase\) - Fauna](#)', '[Kirkidium knightii Association - Fauna](#)', '[Atrypa reticularis-coral Association - Fauna](#)', '[Sphaerirhynchia wilsoni Association \(upper phase\) - Fauna](#)', '[Shaleria ornatella Association - Fauna](#)', '[Protochonetes ludloviensis Association - Fauna](#)'.

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### Composition of Ludlow shelly faunal associations - 3

Ludlow shelly faunal associations	Gastropods												Bivalves																
	<i>Bellerophon baccatus</i>	<i>Cymbularia cf. fastigata</i>	<i>Sinuspira stokei</i>	<i>Sphenospira</i> sp.	<i>Temnodiscus salopiensis</i>	<i>Loxonema sinuosa</i>	<i>Leptozone striatissima</i>	<i>Euomphalus</i> sp.	<i>Oriostoma</i> sp.	<i>Bembexia lloydii</i>	<i>Bucanopsis expansus</i>	<i>Cyclonema corallii</i>	<i>Buchiola</i> sp.	<i>Butovicella migrans</i>	<i>Conocardium</i> sp.	<i>Modiolopsis consors</i>	<i>Nuculites pseudodeltoideus</i>	<i>Nuculites woolhopensis</i>	<i>Praectenodonta ludensis</i>	<i>Praenucula</i> sp.	<i>Slava fibrosa</i>	<i>Leptodesma ampliata</i>	<i>Modiolopsis solenoides</i>	<i>Cyrtodonta perovalis</i>	<i>Actinopteria sowerbyi</i>	<i>Mytilarca siluriana</i>	<i>Orthonota rigida</i>	<i>Cardiola interrupta</i>	<i>Dualina striata</i>
<i>Protochonetes ludloviensis</i> Association									x	x	x																x	x	
<i>Shaleria ornatella</i> Association											x													x	x	x	x		
<i>Sphaerirhynchia wilsoni</i> Association (upper phase)								x	x	x	x	x												x			x	x	
<i>Atrypa reticularis</i> -coral Association								x	x	x																			
<i>Kirkidium knightii</i> Association																								x					
<i>Sphaerirhynchia wilsoni</i> Association (lower phase)							x	x	x	x	x												x	x	x	x	x	x	
<i>Mesopholidostrophia laevigata</i> Association						x	x	x	x	x												x	x	x	x	x	x		
<i>Glassia obovata</i> Association	x	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

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## Composition of Ludlow shelly faunal associations - 4

Ludlow shelly faunal associations	Bivalves (continued)	Goniophora cymbaeformis	Cypricardinia subplanulata	Similodonta sp.	Fuchsella amygdalina	Grammysioidea sp.	Nuculites antiqua	Palaeopecten danbyi	Paracyclas' insueta	Pteronitella retroflexa	Ptychopteria tenuistriata	Modiolopsis complanata	Cephalopods	Cyrtoceras' laevis	Dawsonoceras annulatum	Orthoceras' dimidiatum	?Polygrammoceras bullatum	Orthoceras gregarium	Cyrtocycloceras tenuiannulatum	Cyrtocycloceras tracheale	Kionoceras canaliculatum	Phragmoceras sp.	Ascoceras verniforme
<i>Protochonetes ludloviensis</i> Association		x			x	x	x	x	x	x	x	x								x	x		x
<i>Shaleria ornatella</i> Association		x	x	x	x	x	x	x	x	x	x									x	x		
<i>Sphaerirhynchia wilsoni</i> Association (upper phase)		x			x		x	x	x	x	x									x			
<i>Atrypa reticularis</i> -coral Association										x										x	x		
<i>Kirkidium knightii</i> Association		x																					
<i>Sphaerirhynchia wilsoni</i> Association (lower phase)		x	x		x		x	x	x		x								x	x	x		
<i>Mesopholidostrophia laevigata</i> Association		x	x	x	x	x	x	x	x	x	x							x	x		x	x	
<i>Glassia obovata</i> Association		x												x	x		x	x	x	x	x		

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## Composition of Ludlow shelly faunal associations - 5

Ludlow shelly faunal associations	Trilobites	<i>Leonaspis coronata</i>	<i>Phacops</i> sp.	<i>Raphiophorus parvulus</i>	<i>Otarion megalops</i>	<i>Proetus astringens</i>	<i>Dalmanites myops</i>	<i>Calymene</i> sp.	<i>Hemiarages</i> sp.	<i>Encrinurus</i> sp.	<i>Proetus obconicus</i>	<i>Calymene puellaris</i>	<i>Acastella spinosa</i>	<i>Encrinurus stubblefieldi</i>	<i>Homalonotus knightii</i>	Minor groups	<i>Hyalithes forbesi</i>	<i>Conularia</i> sp.	<i>Cornulites serpularius</i>	<i>Tentaculites tenuis</i>	<i>Serpulites longissimus</i>	<i>Ceratiocaris</i> sp.	eurypterid fragment
<i>Protochonetes ludloviensis</i> Association													x	x	x				x		x	x	x
<i>Shaleria ornatella</i> Association											x	x	x	x				x	x				
<i>Sphaerirhynchia wilsoni</i> Association (upper phase)								x			x								x	x	x		
<i>Atrypa reticularis</i> -coral Association								x											x	x			
<i>Kirkidium knightii</i> Association								x															
<i>Sphaerirhynchia wilsoni</i> Association (lower phase)					x	x	x	x		x									x	x			
<i>Mesopholidostrophia laevigata</i> Association					x	x	x	x	x	x	x							x	x	x			
<i>Glassia obovata</i> Association		x	x	x	x	x	x	x									x						

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