

THE MIDDLE JURASSIC OF NORTHAMPTONSHIRE

Leader: Mr. P.A. Pittham

Sunday, 5th July 1970

During this excursion, about 40 members and friends visited three localities around Northampton and examined exposures of Inferior Oolite and Great Oolite strata. The party assembled at Cranford St. John, on the main Kettering to Thrapston road at 11.00 a.m. and set off for the first locality on the north side of the village.

Locality 1. Cranford North Ironstone Pit (SP 9377).

This is an abandoned ironstone pit on the north side of the Cranford Brook valley. The exposure of the Middle Jurassic strata is in the north face overlooking the last gullet and spoil heaps. The overburden above the Northampton Sand Ironstone is about 60ft thick. The strata exposed are as follows:-

Superficial Deposits

Chalky-Jurassic boulder clay. Variable thickness with thin overlying soil. up to 8ft.

Solid Formations

Jurassic

Great Oolite (Blisworth) Limestone. Well bedded mainly bioclastic limestone, with thin marls and clays. Fossiliferous. 17 ft.

Upper Estuarine Series. Vari-coloured silts and clays with fossiliferous limestone and shelly marls in the middle of the sequence. 22 ft.

Lower Estuarine Series. Variable silts clays and ganisters. 15 ft.

Northampton Sand Ironstones. Oolitic siderite mudstone overlying oolitic ironstone with shelly bands (base not exposed). 19 ft.

A view of the gullet from the top of the spoil showed that only the Ironstone at the bottom of the workings and the Great Oolite Limestone at the top of the overburden were well-exposed. The estuarine beds were largely covered by slumped material. The well-weathered, oxidised, box-ironstone face was examined. Fossils collected from the ironstone included casts and moulds of bivalves (*Liostrea* sp., *Pholadomya* sp., and *Trigonia* sp.).

Climbing from the top of the ironstone over the slumped debris, members of the party were able to pick up a wide range of fossils from the Great Oolite Limestone and the estuarine beds. Examination of the Limestone outcrop yielded many fossils including brachiopods (*Kallirhynchia sharpi*, *Digonella digonoides* and *Avonothyris cranfordensis*), bivalves (*Modiolus* sps., *Liostrea hebridica*, *Pholadomya* sps., *Anisocardia* sp.), corals (*Chomatoseris* sp.), and echinoids (*Acrosalenia* sp., *Holectypus* sp., and *Nucleolites* sp.). Variations in lithology of the Limestone were pointed out and specimens of crystalline bioclastic limestones and pseudo-oolitic limestones were collected.

The party left the quarry at about 12.30 p.m. and travelled by coach and car, via Finedon and Wellingborough, towards Northampton. En route several abandoned ironstone quarries were seen from the road and printed notes issued to members of the party described these and other features of geological interest. Lunch was taken at the World's End Inn at Ecton, on the Northampton to Wellingborough road. The journey then continued via Northampton to Blisworth (SP 7153).

Locality 2. Blisworth Rectory Farm quarry (SP 715530)

This small quarry exposes the Great Oolite Limestone, which here is very fossiliferous. A complete section for this quarry is given by Torrens (1967, p.68).

Members of the party heard a brief explanation of the main features of the Limestone exposed and then examined the strata. From the floor of the quarry were collected specimens of *Kallirhynchia sharpi*, indicating the presence of the basal beds of the Limestone. The fissile detrital - shell limestones from the middle of the formation yielded *Digonella digonoides* in situ and ripple marks were observed on the bedding planes. The Coral-Brachiopod Bed, a rubbly limestone, contained large blocks with corals (*Isastraea* sp. and *Calamophyllia radiata*) and *Avonothyris cranfordensis*. Also found were specimens of bivalves including *Lima (Plagiostoma)* sp., *Pinna (Stegoconcha) ampla* and *Modiolus* sp. One broken specimen of the nautiloid, *Procymatoceras* sp. was collected.

The journey from Blisworth to Paulerspury passed through Towcester and the party arrived at the final locality at about 3.30 p.m.

Locality 3. Paulerspury Pury End quarry (SP 707459)

Here members of the party saw exposure of the Great Oolite Limestone from the basal *Kallirhynchia sharpi* Beds to the contact with the overlying Blisworth Clay. The abundance of the rhynchonellid, *K. sharpi* allowed members to collect a large number of specimens. Other fossils collected included echinoids (*Acrosalenia* sp. and *Holectypus* sp.), crinoid stem ossicles (*Isocrinus* sp) and gastropod and bivalve casts. The excursion finished at this locality and members left by coach and car at about 4.30 p.m. to return north via. the M1.

References

TORRENS, H.S.

1967. The Great Oolite Limestone of the Midlands.
Trans. Leics. Lit. Phil. Soc. Vol. 61, pp. 65-90.