

sliding took place in the Lulworth district and Purbeck. I would therefore add this possible cause of the localization of movement to the two suggested in my paper (p. 21). Probably the three causes combined to produce the present remarkable effects when the Tertiary folding set the rocks in motion.

W. J. ARKELL.

THE AGE OF THE ELSWORTH ROCK.

SIR,—Dr. Spath's change of ground is bewildering. In his first letter he claimed to have anticipated my conclusions. In his second letter, unable, when challenged, to produce the references or justify his charges, he applies himself to destroying the conclusions. In the well-known manner of S. S. Buckman he splits up the stratigraphical units and refers mysteriously to missing foreign faunas. By this means doubt can be cast on any correlation.

Study in recent years of Corallian ammonites in museums from the west of France to Berlin and from Scotland to the Rhone Valley, combined with a little collecting, has convinced me that our Corallian Beds are very well representative (except in the upper parts not germane to this discussion), and that broad zones such as I use are all that there is scientific basis for using. I have not heard from those in charge that Dr. Spath has examined any of these collections. To assert an opinion, still more assume superior knowledge, without doing so is unjustifiable. The literature and foreign material in this country are far too meagre. Dr. Spath, moreover, has much field work to do before he can show the inapplicability of these zones in England.

With regard to the new subject raised by Dr. Spath, concerning the types of *Am. serratus* Sow. and *Am. cordatus* Sow., the course I have taken is that which involves least alteration of the usage of the last century or more. In the case of *Am. serratus* I have upheld the conclusion of the reviser, Salfeld, against a subsequent reversal by Dr. Spath (although from the latter's sentence, containing the words "chaos" and "gratuitous alteration", the reader derives just the opposite meaning). *Am. cordatus* is more complicated and there has yet been no reviser. As the matter will be discussed with full documentation in my monograph I need not encroach on your space by anticipating the account except to say that what I advocate is adherence to the interpretation of *Am. cordatus* made by the leading Jurassic palaeontologists and stratigraphers of several generations, so that it can continue to be used as index fossil for the Cordatus Zone, one of the first to be named (in 1852) and constantly recurring in world literature ever since.

W. J. ARKELL.

UNIVERSITY MUSEUM,
OXFORD.
9th May, 1938.

SIR,—I am sorry if Dr. Arkell is bewildered, and I will do my best to clarify the position. All the points raised can only be resolved by dispassionate reading of my Kachh Memoir (*Palaeontologia Indica*, N.S., vol. ix, No. 2, pt. 6, 1933) and my previous letters, which contain the justification of the charges which Dr. Arkell says I am unable to produce. Some of his latest statements only amount to *argumentum ad hominem*, familiar in discussions of this sort. As a rule, this method needs no reply, but comment on some of the points raised seems justifiable in the present case.

What Dr. Arkell interprets as a change of ground on my part is of course only the development of a complicated argument. He is quite right in referring to S. S. Buckman's method of splitting up stratigraphical units as well known; the work of this genius may be more fully appreciated by future generations, and I am quite content to be on his side in this respect. But I have not referred mysteriously to anything; rather would it seem that the things I referred to are mysterious to Dr. Arkell.

As regards the second paragraph of Dr. Arkell's letter, I need only say that the collections of Corallian ammonites in the British Museum (Natural History), on which I have had the privilege of working for twenty-five years, include foreign as well as British specimens, and nobody who has seen them all could describe the foreign material as meagre.

My mention of the two ammonite-species referred to in Dr. Arkell's third paragraph does not constitute the introduction of a new subject. It merely draws attention to the means by which he has been able to produce some of the arguments which I regard as specious. The fact that he follows the lead of other palaeontologists is not relevant: two (or more) wrongs never yet made a right.

Dr. Arkell can only maintain his position in regard to *Am. cordatus* Sowerby (the status of which has of course been fixed by the works of Healey, Crick, and Buckman) by electing to disregard the Rules of Nomenclature. I submit that this is an attitude to be deplored, especially when adopted by one who has undertaken monographic work.

L. F. SPATH.

BRITISH MUSEUM (NATURAL HISTORY).
20th May, 1938.

[This correspondence is now closed.—ED.]