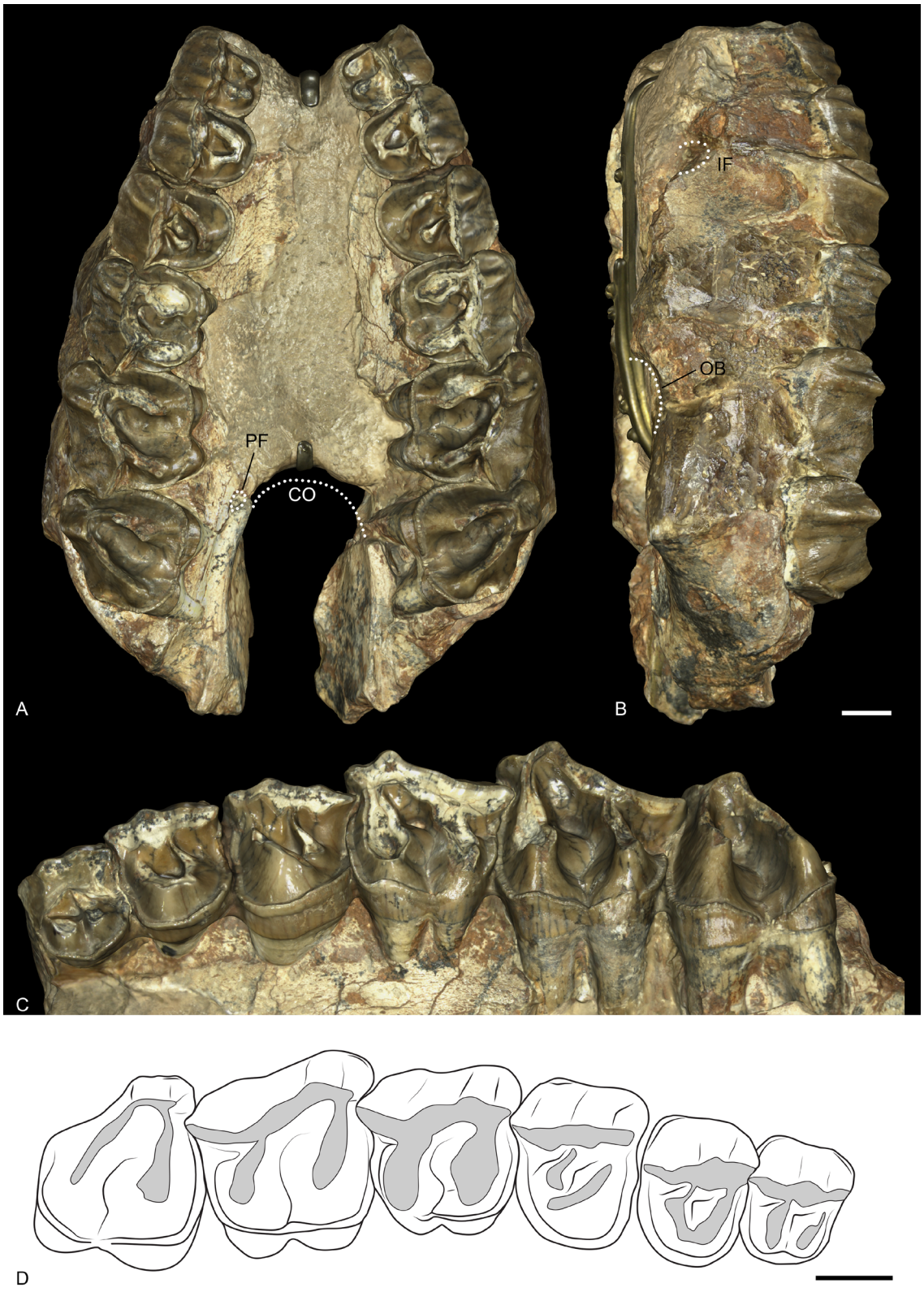

Fig. 11. *Ronzotherium filholi* (Osborn, 1900) from the Phosphorites du Quercy (early Oligocene?, France). Holotype maxilla MNHN.F.QU7232 with P2–M3. **A**. Occlusal view. **B**. Right lateral view. **C**. Left lingual view. **D**. Drawing of the right toothrow with P2–M3 in occlusal view. Abbreviations: CO = choanae opening; IF = infraorbital foramen; OB = orbital border; PF = palatine foramen. Scale bars: 2 cm.

Description

Maxilla. The right and left maxillae of the holotype MNHN.F.QU7232 are well preserved, and bear P2–M3 on both sides (Fig. 11). The anterior border of the choanae opens approximately at the level of M2 and the palatine foramen is at the level of the anterior border of M3. The infraorbital foramen (still preserved via the infraorbital canal) is located above the anterior border of P4. The anterior border of the orbit is between M2 and M1. The zygomatic arches are broken but the anterior border was above M2 and was high above the teeth neck. The retromolar space behind M3 is short.

Fig. 12. *Ronzotherium filholi* (Osborn, 1900) from the Phosphorites du Quercy (early Oligocene?, France). Paratype left hemimandible MNHN.F.QU7202 with p3–m3. **A**. Lateral view. **B**. Occlusal view. **C**. Medial view. Scale bar: 2 cm.

Mandibles. The paratype hemimandibles MNHN.F.QU7202 and MNHN.F.QU7201 are incomplete, the symphysis and the two rami are not preserved (Fig. 12). The foramen mentale was anterior to p3. The base of the corpus mandibulae is straight and the lingual groove is present, though extremely shallow, and barely visible. The foramen mandibulare is located below the teeth neck line. Because of the fragmentary condition of the specimen, no other characters can be observed. From another mandible from Quercy (MNHN.F.QU17193), we can observe that the posterior border of the mandible and the foramen mentale were both located at the level of p2, lingually and labially.

Upper dentition. The cheek teeth have no cement and the crown is low (Fig. 11). The LP3–4/LM1–2 ratio is equal to 0.51, i.e., the premolar row is long compared to the molar row.

The first premolar is not preserved on the holotype MNHN.F.QU7232. Only one P1 was found among the numerous isolated teeth of *Ronzotherium* from Quercy in the MNHN collection, on a maxilla fragment with P2 (MNHN.F.QU16445). It has three roots, two labial and a lingual one. The paracone is the largest cusp, and the paracone and metacone folds are strong. The protocone is extremely weak, and fuses with the strong and continuous lingual cingulum. The protocone connects lingually to the hypocone by a small bridge. The protoloph is very weak and does not fully connect to the paracone. The metaloph is complete and connects the well-developed hypocone to the metacone. The parastyle is weak. The anterolingual cingulum is present. The labial cingulum is strong under the parastyle and the metacone but absent under the paracone.

All upper premolars (P2–4) on the holotype have a very strong and continuous lingual cingulum, which extends anteriorly and posteriorly. The labial cingulum is only present under the parastyle and metastyle, and completely absent under the paracone and metacone. The paracone fold is rather strong and the metacone fold is weak. There is no constriction of the protocone. They have no crista, crochet or antecrochet and the postfossette is narrow. They all bear three roots.

The protocone and hypocone of P2 are equal and connected by a low lingual bridge. The protoloph is weak and directed towards the parastyle, not the paracone, and does not fully connect to the ectoloph. The metaloph is continuous and postero-lingually directed.

On P3, the hypocone is very weak and very poorly differentiated from the protocone by a shallow lingual groove. The protoloph is straight, connected to the parastyle and well developed. The metaloph is thinner, transverse and S-shaped.

The protocone and hypocone of P4 are completely fused, and the protoloph is L-shaped. The metaloph is very weak and it is completely separated from the protocone/hypocone. It is S-shaped, short and connects to the ectoloph between the paracone and the metacone.

Upper molars have four roots. The lingual cingulum is strong and continuous, except under the hypocone of M1, where it is completely fainted. The labial cingulum is almost completely absent except for a few traces either under the parastyle or the metastyle. The paracone fold is strong and the metacone fold is absent. There is a broad and weak mesostyle on the ectoloph of M1. The crochet, crista and medifossette are completely absent and there is no protocone constriction. The posterior part of the ectoloph is straight.

The M1 is square. The antecrochet is broad and distinguished by a postero-lingual groove on the protoloph. The postfossette is very short and shallow. The metaloph and protoloph are transverse. The posterior cingulum is high and continuous.

The M2 differs from M1 by its larger size, the more oblique lophs, a shorter metaloph, and the metacone more lingual. There is no lingual groove of the protocone. The mesostyle is very weak and disappears at the base of the crown.

The M3 is quadrangular but bears no metacone. The metaloph and ectoloph are fused into an ectometaloph. The protocone is not constricted and the protoloph is transverse. The posterior groove on the ectometaloph is present.

Lower dentition. The p1, p2 and anterior dentition are unknown from the paratypes MNHN.F.QU7202 and MNHN.F.QU7201, and from the other mandibles from Quercy (Fig. 12).

Other lower cheek teeth (p3–m3) are double-rooted, low-crowned, and have no cement. The labial cingulum is strong and almost completely continuous, it only vanishes under the ectolophid groove and it is very weak overall on m1. The lingual cingulum is present at the opening of the anterior and posterior valleys. The ectolophid groove is developed until the neck. In occlusal view, the trigonid is very angular and forms a right dihedron while the talonid is rounded. The metaconid of p3 bears a weak anterior crest that is almost joining the anterior branch of the paralophid. There are no vertical rugosities on p3. The talonid of p3–4 is poorly developed and the entoconid is almost completely absent. The hypolophid is very low and the posterior valley is U-shaped in lingual view. The anterior valley opens much higher above the neck than the posterior one. The metaconid of premolars is very large and slightly constricted. The anterior branch of the paralophid is long on molars and premolars. The entoconid of molars is strongly developed and slightly constricted.

Postcranials. The postcranial remains from the Quercy collection can only be hardly associated with the cranial remains for several reasons. First, almost all specimens belong to 'old' collections, i.e., the exact localities were not specified, and specimens were mixed together and could belong to several loci. Furthermore, the Quercy localities range in age from the early Eocene to the early Miocene, and thus cannot be precisely dated. Therefore, only a few well-preserved postcranial remains are tentatively attributed to ?*R. filholi* and described here.

Scaphoid. The scaphoid NMB-QV-275 is very well preserved, except for the distal part of the anterior apophysis, which is partly broken (Fig. 13A–D). The posterior height is slightly reduced compared to the anterior. The proximal articulation for the radius is large, and very concave anteroposteriorly. It is lozenge-shaped in proximal view, and very developed laterally. Below and anterior to this proximal facet is the thin and elongated anteroproximal facet for the lunate, which is completely fused to the postero-proximal one. The anteroproximal one is horizontal while the posterior is oblique. The anterodistal facet for the lunate is separated from the proximal ones by a wide groove. This facet is long and low, but hardly distinguishable from the distal magnum facet just below. This distal facet for the magnum is very concave in lateral view and separated from the large medio-distal facet for the trapezoid by a high ridge. The latter is also very concave in lateral view, but very convex mesio-laterally, and bears a large extension on the medial side. The trapezium facet is not reduced and separated from the trapezoid facet by a ridge. It is quite flat and oval-shaped.

Lunate. The lunate NMB-QE-440 is very poorly preserved and the posterior part is broken (Fig. 13E–I). In anterior view, the distal border is very acute. Three facets are visible in medial view, two small ones are for the scaphoid, while the most distal one, for the magnum, is thin and elongated until the posterior border. On the lateral side, the two facets for the pyramidal are separated by a deep groove. The distal facet is larger than the proximal one. In distal view, the unciform facet is large, almost rectangular and anteroposteriorly concave.

Pyramidal. The pyramidal NMB-QE-433 is perfectly preserved (Fig. 13J–N). The proximal articulation for the ulna is very large, concave anteroposteriorly and convex transversally. The postero-proximal facet for the pisiform is long and drop-shaped. On the medial side, there are two large facets for the lunate, separated by a deep groove. The distal one is symmetrical and slightly curved towards the posterior side. In distal view, the facet for the unciform is triangular and concave anteroposteriorly.

Magnum. The magnum NMB-QE-472 is well preserved and complete (Fig. 13O–S). The anterior side is pentagonal, and the proximal apophysis is very high. In anterior view, the anterior border of the scaphoid facet is slightly concave while the distal border is almost completely straight. On the lateral

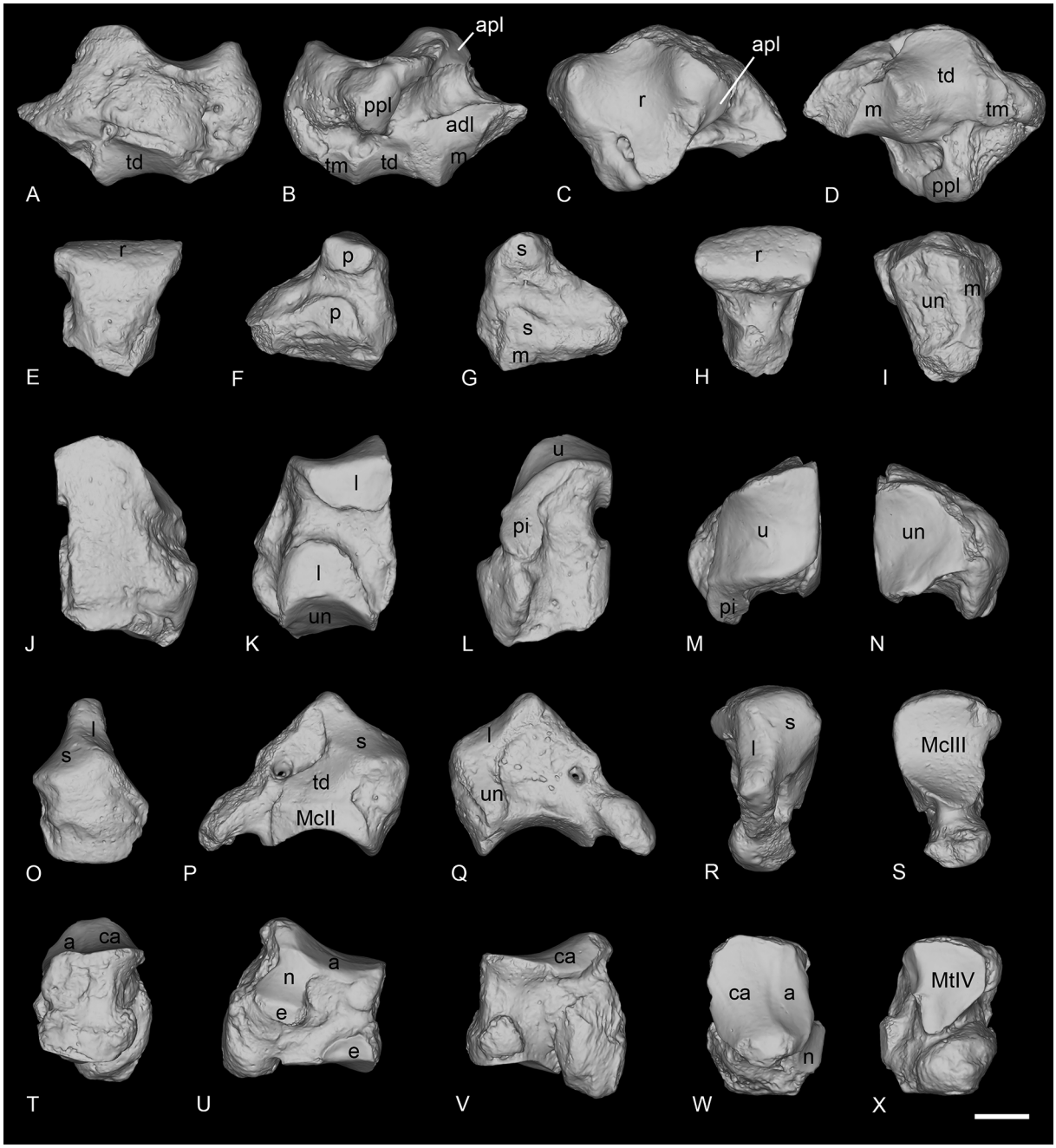

Fig. 13. ?*Ronzotherium filholi* (Osborn, 1900) from the Phosphorites du Quercy (early Oligocene?, France). – **A–D**. Right scaphoid NMB-QV-275. **A**. Medial view. **B**. Lateral view. **C**. Proximal view. **D**. Distal view. – **E–I**. Right lunate NMB-QE-440. **E**. Anterior view. **F**. Lateral view. **G**. Medial view. **H**. Proximal view. **I**. Distal view. – **J–N**. Left pyramidal NMB-QE-433. **J**. Anterior view. **K**. Medial view. **L**. Posterior view. **M**. Proximal view. **N**. Distal view. – **O–S**. Left magnum NMB-QE-472. **O**. Anterior view. **P**. Medial view. **Q**. Lateral view. **R**. Proximal view. **S**. Distal view. – **T–X**. Left cuboid NMB-QE-362. **T**. Anterior view. **U**. Medial view. **V**. Lateral view. **W**. Proximal view. **X**. Distal view. Abbreviations: a = astragalus; adl = anterodistal facet for the lunate; apl = anteroproximal facet for the lunate; ca = calcaneus; e = ectocuneiform; l = lunate; m = magnum; n = navicular; p = pyramidal; pi = pisiform; ppl = postero-proximal facet for the lunate; r = radius; s = scaphoid; td = trapezoid; tm = trapezium; u = ulna; un = unciform. Scale bar: 2 cm.