



FIGURE 19.14. Dolomite textures. (A) A field photograph of an outcrop approximately 5 m high where the calcite–dolomite boundary cross-cuts the bedding. (B) A dolomite mudstone with complete preservation of original sedimentary textures. Field of view 5 mm. From Adams and MacKenzie (1998). (C) A brachiopod shell and adjacent cement partially replaced by two dolomite crystals in the center of the photomicrograph. Field of view ~ 2.75 mm. From Adams and MacKenzie (1998). (D) Euhedral rhombs of dolomite a few tens of microns in diameter partially replacing carbonate mudstone. Field of view 2.4 mm. From Scholle and Ulmer-Scholle (2003). In (E) and (F) are shown two views of completely dolomitized carbonate. The original fabric is nearly completely obscured beneath the dolomite mosaic in (E), but, by placing a white sheet of paper between the thin section and the stage, original intraclastic and peloidal textural “ghosts” are revealed in (F). The field of view for (E) and (F) is 4 mm. From Adams and MacKenzie (1998). (G) An interlocking anhedral mosaic of coarsely crystalline dolomite. Field of view 2 mm. From Adams and MacKenzie (1998). (H) Dolomite with curved crystal faces (and twin planes) and sweeping extinction is known as “saddle” dolomite and occurs both as replacement mosaics and as cements. Field of view 4.4 mm. From Scholle and Ulmer-Scholle (2003). AAPG © 2003 reprinted by permission of the AAPG, whose permission is required for further use.