|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Esteban et al. (2004) | Features / Fossil species | *Cedroxylon shakhtnaense* comb. nov. | 1. *Abies* sect. *Abies*\_ Type:*Abies alba* Mill. | *A.**cephalonica*Loud. Carrière | *A. cilicica* (Ant. & Kotschy) | *A.**nebrodensis* Mattei (microscopic observation) | *A.**nordmanniana*(Steven) Spach | *A. numidica*de Lannoy ex Carrière | *A. pinsapo*Boiss. (microscopic observation) |
| AT1 | Well‐definedgrowth rings | + | + | + | + | + | + | + | + |
| AT4 | Axial tracheids ofpolygonal section | + | + | + | + | + | + | + | + |
| AT6 | Intercellularspaces present | + | ‐ | ‐ | ‐ | + | ‐ | ‐ | ‐ |
| AT8 | Spiral thickeningspresent, but not in all the axial tracheids | ‐ | + | + | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT9 | Bordered pitspresent on the tangential walls of the axialtracheids | + | + | + | + | + | + | + | + |
| AT10 | Uniseriatebordered pits on the radial walls of the axial | + | + | + | + | + | + | + | + |
| AT11 | Biseriate borderedpits on the radial walls‐yes (Esteban et al. 2009)of the axial tracheids | (occasionally) | ‐ | + | ‐ | + | ‐ | ‐ | ‐ |
| AT14 | Bordered pits withincluded elliptic aperture | ‐ | ‐ |  |  | ‐ |  | + | ‐ |
| AT16 | Pits presentborders with radial striation | ‐ | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT19 | Bars of Sanio | (occasionally) | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT20 | Trabecula | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT21 | Crystals present inaxial tracheids | ‐ | ‐ | ‐ | ‐ | ‐ | + | ‐ | + |
| P1 | Axial parenchymaabsent or scarce | + | + | ‐ | ‐ | + | + | + | + |
| P2 | Axial parenchymawith smooth transverse walls | + | ‐ | ‐ | ‐ | ‐ | ‐ | + | ‐ |
| P3 | Axial parenchymawith nodular transverse walls | + | + | + | + | + | + | + | + |
| P4 | Axial parenchymawith crystals | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | + | + |
| P5 | Axial parenchymawith resin | ? | ‐ | ‐ | ‐ | ? | ‐ | ‐ | ‐ |
| P6 | Diffuse axialparenchyma present | + | + | + | + | ‐ | + | ‐ | + |
| P8 | Terminal axialparenchyma present | + / ‐ | ‐ | ‐ | ‐ | + | ‐ | + | ‐ |
| R1 | Uniseriate rays | + | + | + | + | + | + | + | + |
| R2 | Partially biseriaterays | (in less than 10% of thetotal number of the rays) | ‐ | + | ‐ | + | ‐ | + (Esteban etal. 2009) | ‐ |
| R4 | Ray height from 1to 15 cells | + | + | + | + | + | + | + | + |
| R5 | Ray heightfrom 16 to 30 cells | + | + (1‐48 acc. Estebanet al. 2009) | ‐ (1‐26 acc.Esteban et al. 2009) | ‐ (1‐22 acc.Esteban et al. 2009) | ? | ‐ (1‐18 acc. Estebanet al. 2009) | ‐ (1‐17 acc.Esteban et al. 2009) | + (1‐40‐50acc. Esteban et al. 2009) |
| R7 | Number of raysper mm2 <70 | + | + | ‐ | ‐ | ? | ‐ | ‐ | ‐ |
| R9 | Number of raysper mm2 >70 | ‐ | ‐ | + | + | ? | + | + | + |
| R17 | Rayparenchyma with nodular | + | + | + | + | + | + | + | + |
| R19 | Rayparenchyma with pitted | + | + | + | + | + | + | + | + |
| R20 | Rayparenchyma | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| R23 | Piceoid crossfield | + | + | + | + | ‐ | + | + | + |
| R24 | Cupressoid crossfield pits | ‐ | ‐ | ‐ | ‐ | + | ‐ | ‐ | ‐ |
| R25 | Taxodioid crossfield pits ‐ yes (Esteban et al.2009) | + | + | + | + | + | + | + | + |
| R26 | 1 to 2 pits percross field | + | + | + | + | + | + | + | + |
| R27 | 3 to 4 pits per cross field | + | + (1‐4 acc. Estebanet al. 2009) | + (1‐3 acc.Esteban et al. 2009) | + (1‐3‐4 acc.Esteban et al. 2009) | + | + (1‐3 acc. Estebanet al. 2009) | ‐ | + (1‐4 acc.Esteban et al. 2009) |
| RC1 | Resin canalsabsent | + | + | + | + | + | + | + | + |
| RC3 | Thick‐walledepithelial cell resin canals | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| RC4 | Number ofepithelial cells in the axial resin canals <9 | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| RC5 | Number ofepithelial cells in the axial resincanals > | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |