|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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‐defined  growth rings | + | + | + | + | + | + | + | + |
| AT4 | Axial tracheids of  polygonal section | + | + | + | + | + | + | + | + |
| AT6 | Intercellular  spaces present | + | ‐ | ‐ | ‐ | + | ‐ | ‐ | ‐ |
| AT8 | Spiral thickenings  present, but not in all the axial tracheids | ‐ | + | + | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT9 | Bordered pits  present on the tangential walls of the axial  tracheids | + | + | + | + | + | + | + | + |
| AT10 | Uniseriate  bordered pits on the radial walls of the axial | + | + | + | + | + | + | + | + |
| AT11 | Biseriate bordered  pits on the radial walls‐yes (Esteban et al. 2009)  of the axial tracheids | (occasionally) | ‐ | + | ‐ | + | ‐ | ‐ | ‐ |
| AT14 | Bordered pits with  included elliptic aperture | ‐ | ‐ |  |  | ‐ |  | + | ‐ |
| AT16 | Pits present  borders with radial striation | ‐ | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT19 | Bars of Sanio | (occasionally) | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT20 | Trabecula | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT21 | Crystals present in  axial tracheids | ‐ | ‐ | ‐ | ‐ | ‐ | + | ‐ | + |
| P1 | Axial parenchyma  absent or scarce | + | + | ‐ | ‐ | + | + | + | + |
| P2 | Axial parenchyma  with smooth transverse walls | + | ‐ | ‐ | ‐ | ‐ | ‐ | + | ‐ |
| P3 | Axial parenchyma  with nodular transverse walls | + | + | + | + | + | + | + | + |
| P4 | Axial parenchyma  with crystals | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | + | + |
| P5 | Axial parenchyma  with resin | ? | ‐ | ‐ | ‐ | ? | ‐ | ‐ | ‐ |
| P6 | Diffuse axial  parenchyma present | + | + | + | + | ‐ | + | ‐ | + |
| P8 | Terminal axial  parenchyma present | + / ‐ | ‐ | ‐ | ‐ | + | ‐ | + | ‐ |
| R1 | Uniseriate rays | + | + | + | + | + | + | + | + |
| R2 | Partially biseriate  rays | (in less than 10% of the  total number of the rays) | ‐ | + | ‐ | + | ‐ | + (Esteban et  al. 2009) | ‐ |
| R4 | Ray height from 1  to 15 cells | + | + | + | + | + | + | + | + |
| R5 | Ray height  from 16 to 30 cells | + | + (1‐48 acc. Esteban  et al. 2009) | ‐ (1‐26 acc.  Esteban et al. 2009) | ‐ (1‐22 acc.  Esteban et al. 2009) | ? | ‐ (1‐18 acc. Esteban  et al. 2009) | ‐ (1‐17 acc.  Esteban et al. 2009) | + (1‐40‐50  acc. Esteban et al. 2009) |
| R7 | Number of rays  per mm2 <70 | + | + | ‐ | ‐ | ? | ‐ | ‐ | ‐ |
| R9 | Number of rays  per mm2 >70 | ‐ | ‐ | + | + | ? | + | + | + |
| R17 | Ray  parenchyma with nodular | + | + | + | + | + | + | + | + |
| R19 | Ray  parenchyma with pitted | + | + | + | + | + | + | + | + |
| R20 | Ray  parenchyma | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| R23 | Piceoid cross  field | + | + | + | + | ‐ | + | + | + |
| R24 | Cupressoid cross  field pits | ‐ | ‐ | ‐ | ‐ | + | ‐ | ‐ | ‐ |
| R25 | Taxodioid cross  field pits ‐ yes (Esteban et al.  2009) | + | + | + | + | + | + | + | + |
| R26 | 1 to 2 pits per  cross field | + | + | + | + | + | + | + | + |
| R27 | 3 to 4 pits per cross field | + | + (1‐4 acc. Esteban  et al. 2009) | + (1‐3 acc.  Esteban et al. 2009) | + (1‐3‐4 acc.  Esteban et al. 2009) | + | + (1‐3 acc. Esteban  et al. 2009) | ‐ | + (1‐4 acc.  Esteban et al. 2009) |
| RC1 | Resin canals  absent | + | + | + | + | + | + | + | + |
| RC3 | Thick‐walled  epithelial cell resin canals | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| RC4 | Number of  epithelial cells in the axial resin canals <9 | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| RC5 | Number of  epithelial cells in the axial resin  canals > | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |