

EARTH'S NATURAL TITANS: AN ALTERNATE PERSPECTIVE ON ELEVATION USING TOPOGRAPHIC PROMINENCE

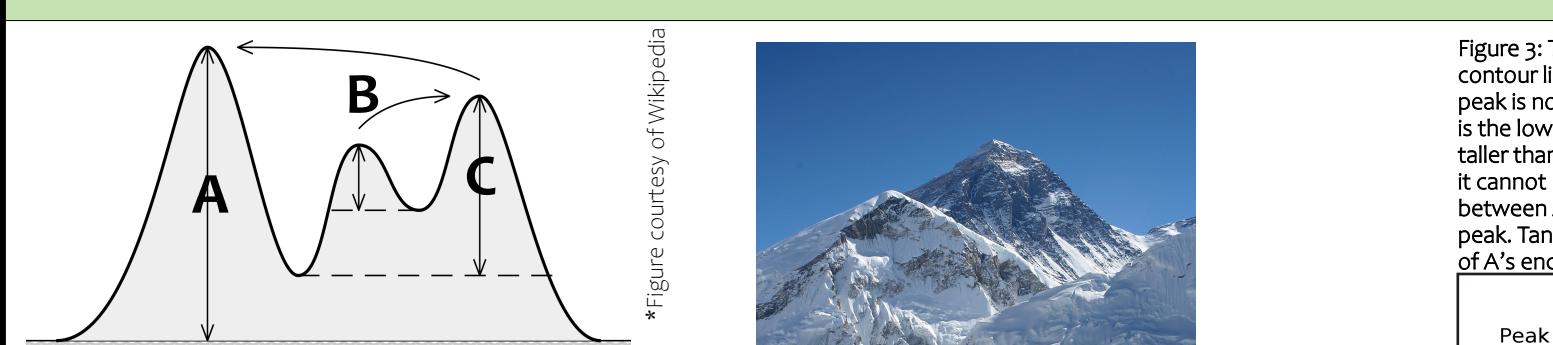
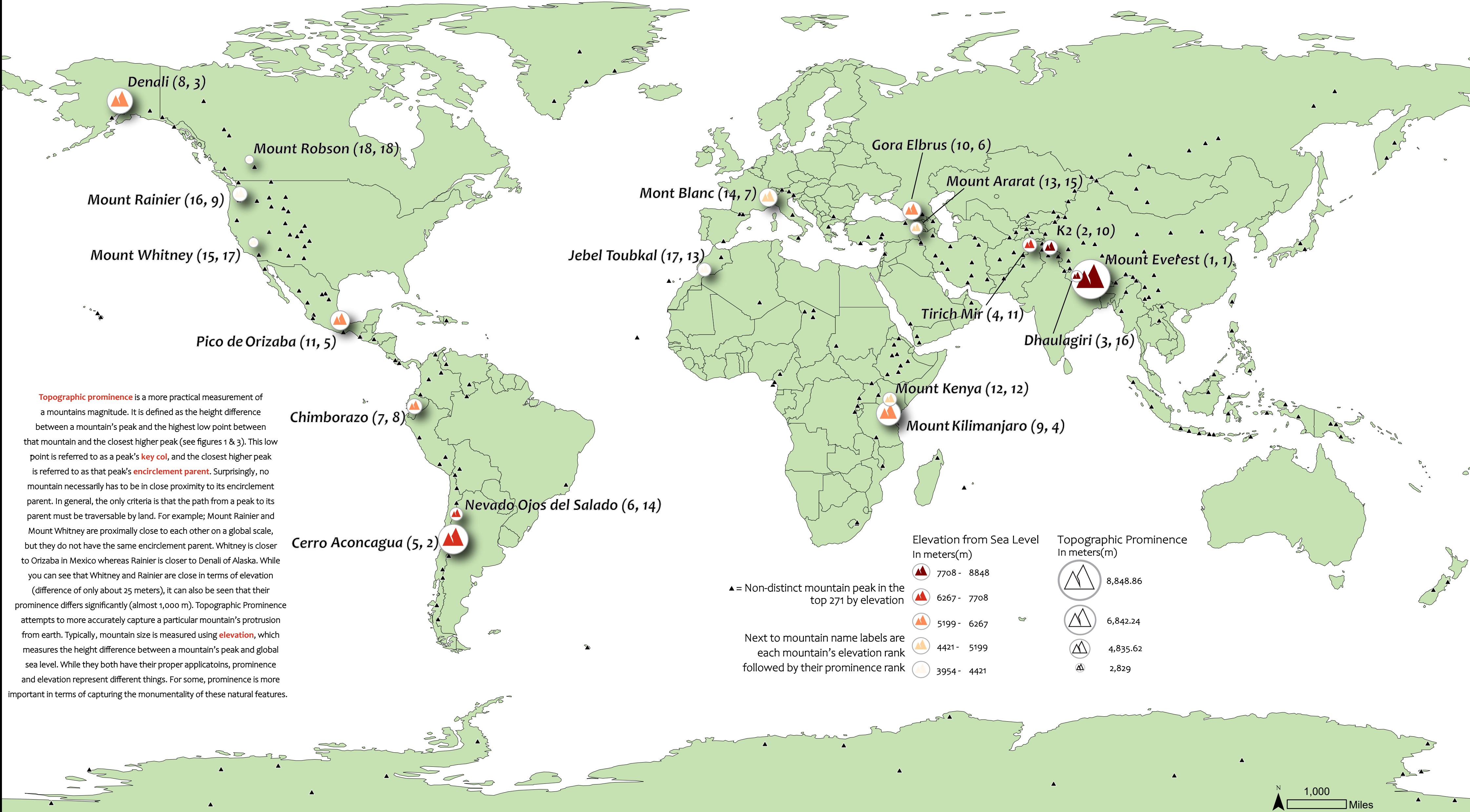
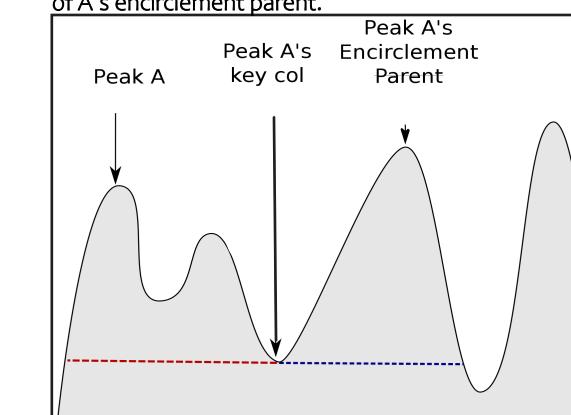


Figure 1: This graphic illustrates an interesting concept regarding topographic prominence. While all three peaks may be titanic in terms of elevation, the two smaller peaks take a massive hit in terms of prominence. Here, prominence is represented by the vertical lines within each peak. Peak A's prominence is exactly equal to its elevation. This occurs when there is no taller peak contained in the same landmass, meaning A has no encirclement parent. The two examples present on this map include Aconcagua and Everest. These are the only two such cases outside of mountains on islands, Antarctica, or Oceania.



Figure 2: Mount Everest of the Himalayan mountain range is the tallest and most prominent peak in the world.

Figure 3: Topographic prominence illustrated. While there is a higher contour line between A and the next closest peak, the next closest peak is not taller than A, meaning it cannot be A's key col. Instead, it is the lower contour line that exists between A and the closest peak taller than A. Even though the right-most peak is the tallest peak here, it cannot be A's encirclement parent because there is a smaller drop-off between A and a peak taller than A that is also closer than the right-most peak. Tangentially, this right-most peak would be the encirclement parent of A's encirclement parent.



*Figure courtesy of Wikipedia

- List of represented mountain peaks by elevation:
1. Mount Everest, Himalayas, Nepal (8848.86 m)
 2. K2, Karakoram Range, Pakistan (8611 m)
 3. Denali, Alaska Range, United States (6191 m; -47 m)
 4. Mount Kilimanjaro, Eastern Rift Mountains, Tanzania (5895 m; -10 m)
 5. Pido de Orizaba, Trans-Mexican Volcanic Belt, Mexico (5636 m; -714 m)
 6. Gora Elbrus, Caucasus Mountains, Russia (5642 m; -901 m)
 7. Mount Blanc, Alps, France (4808 m; -113 m)
 8. Chimborazo, Cordillera Occidental, Ecuador (6263 m; -2145 m)
 9. Mount Rainier, Cascade Range, United States (4393 m; -370 m)
 10. K2, Karakoram Range, Pakistan (8611 m; -4594 m)
 11. Mount Kenya, Eastern Rift Mountains, Kenya (5199 m; -1374 m)
 12. Mount Ararat, Armenia Highlands, Turkey (5137 m)
 13. Jebel Toubkal, Atlas Mountains, Morocco (4167 m; -410 m)
 14. Nevado Ojos del Salado, Andes, Argentina (6893 m; -3205 m)
 15. Mount Whitney, Sierra Nevada, United States (4418 m)
 16. Mount Rainier, Cascade Range, United States (4393 m)
 17. Jebel Toubkal, Atlas Mountains, Morocco (4167 m)
 18. Mount Robson, Canadian Rockies, Canada (3959 m)

- List of represented mountain peaks by prominence, including difference in prominence and elevation:
1. Mount Everest, Himalayas, Nepal (8848.86 m; -0 m)
 2. Cerro Aconcagua, Andes, Argentina (6960.80 m; -0 m)
 3. Denali, Alaska Range, United States (6191 m; -47 m)
 4. Mount Kilimanjaro, Eastern Rift Mountains, Tanzania (5895 m; -10 m)
 5. Pido de Orizaba, Trans-Mexican Volcanic Belt, Mexico (5636 m; -714 m)
 6. Gora Elbrus, Caucasus Mountains, Russia (5642 m; -901 m)
 7. Mount Blanc, Alps, France (4808 m; -113 m)
 8. Chimborazo, Cordillera Occidental, Ecuador (6263 m; -2145 m)
 9. Mount Rainier, Cascade Range, United States (4393 m; -370 m)
 10. K2, Karakoram Range, Pakistan (8611 m; -4594 m)
 11. Mount Kenya, Eastern Rift Mountains, Kenya (5199 m; -1374 m)
 12. Mount Ararat, Armenia Highlands, Turkey (5137 m; -1526 m)
 13. Jebel Toubkal, Atlas Mountains, Morocco (4167 m; -4810 m)
 14. Nevado Ojos del Salado, Andes, Argentina (6893 m; -3205 m)
 15. Mount Whitney, Sierra Nevada, United States (4418 m; -1345 m)
 16. Dhaulagiri, Himalayas, Nepal (8167 m; -4810 m)
 17. Mount Whitney, Sierra Nevada, United States (4418 m; -1345 m)
 18. Mount Robson, Canadian Rockies, Canada (3959 m; -1130 m)