Ancient wolves had bone-crushing teeth, scientists find

by Bend_Weekly_News_Sources

A specialized breed of anÂ-cient gray wolves once roamed AlasÂ-kaâ€™s icy exÂ-panses, with bone-crushing jaws for takÂ-ing on huge prey, scientists say.The exÂ-tinct AlasÂ-kan wolves had roÂ-bust bodÂ-ies, strong jaws, and masÂ-sive caÂ-nine teeth for killÂ-ing prey largÂ-er than themÂ-selves and regÂ-uÂ-larly conÂ-sumÂ-ing large bones, acÂ-cordÂ-ing to the reÂ-searchÂ-ers. But the wolves apÂ-parÂ-ently died out along with othÂ-er big anÂ-iÂ-mals at the end of the last Ice Age.â€œThe unÂ-ique atÂ-tributes of AlasÂ-kan PleisÂ-toÂ-cene [Ice-Age] wolves had not been preÂ-viÂ-ously recÂ-ogÂ-nized,â€• said Blaire Van ValkenÂ-burgh of the UnÂ-iversÂ-ity of CalÂ-iÂ-forÂ-nia, Los AnÂ-geÂ-les, one of the reÂ-searchÂ-ers. â€œThe livÂ-ing gray wolf difÂ-fers draÂ-matÂ-icÂ-ally from that which roamed AlasÂ-ka just 12,000 years ago.â€• The findÂ-ings apÂ-pear in the June 21 onÂ-line isÂ-sue of the reÂ-search jourÂ-nal CurÂ-rent BiÂ-olÂ-oÂ-gy. The gray wolf is one of the few large predaÂ-tors that surÂ-vived the mass exÂ-tinction of the late Ice Age. NevÂ-erÂ-theÂ-less, wolves disapÂ-peared from northÂ-ern North AmerÂ-iÂ-ca at that time, she said; but they lived on in the Old World, which may exÂ-plain their preÂ-sence in North AmeÂ-rica toÂ-day.To study AlasÂ-kaâ€™s anÂ-cient wolves, Van ValkenÂ-burgh and colÂ-leagues colÂ-lectÂ-ed bones of the anÂ-iÂ-mals from perÂ-maÂ-frost deÂ-posits and exÂ-amÂ-ined their chemÂ-iÂ-cal comÂ-poÂ-siÂ-tion and DNA. The late-PleisÂ-toÂ-cene wolves were geÂ-netÂ-icÂ-ally and physÂ-ically disÂ-tinct from exÂ-istÂ-ing wolves, the sciÂ-enÂ-tists reÂ-ported: the skull shape, tooth weÂ-ar and bone chemÂ-istry sugÂ-gest they were hunters and scavÂ-engers of exÂ-tinct megaÂ-fauna.

The archaic wolves had â€œmore masÂ-sive teeth and broader skulls with shorter snouts, enÂ-hancÂ-ing their abilÂ-ity to proÂ-duce strong bites,â€• Van ValkenÂ-burgh said. â€œThe studÂ-ies of their tooth wear and fracÂ-ture rate showed high levÂ-els of both, conÂ-sistÂ-ent with regÂ-uÂ-lar and freÂ-quent bone-cracking and -crunching.â€•Those charÂ-acÂ-terÂ-isÂ-tics probably came in handy in anÂ-cient AlasÂ-ka, where the wolves faced stiff comÂ-peÂ-tiÂ-tion for food from some forÂ-miÂ-daÂ-ble comÂ-petiÂ-tors, she added, inÂ-cludÂ-ing liÂ-ons, short-faced bears, and saber-tooth cats. DurÂ-ing peÂ-riÂ-ods of inÂ-tense comÂ-peÂ-tiÂ-tion among predaÂ-tors, modÂ-ern wolves alÂ-so conÂ-sume carÂ-casses more fulÂ-ly, she noted. They inÂ-gest more bone and eat faster, inÂ-creasÂ-ing the risk of tooth fracÂ-ture.The long-ago deÂ-mise of this speÂ-cialÂ-ized wolf form may porÂ-tend things to come for speÂ-cialÂ-ized groups of exÂ-istÂ-ing predaÂ-tors, Van ValkenÂ-burgh said. For exÂ-amÂ-ple, a unÂ-ique type of noÂ-madÂ-ic North AmerÂ-iÂ-can gray wolf was reÂ-cently disÂ-covÂ-ered. Packs of them miÂ-grate across the tunÂ-dra along with carÂ-iÂ-bou and keep their numÂ-bers in check. In conÂ-trast, othÂ-er wolves are terÂ-riÂ-toÂ-rial and non-migratory. â€œGlobal warmÂ-ing threatÂ-ens to elimÂ-iÂ-nate the tunÂ-dra and it is likely that this will mean the exÂ-tinction of this imÂ-porÂ-tant predaÂ-tor,â€• she said.

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