At 400, clam may be longest-lived animal known

by Bend_Weekly_News_Sources

Can you imÂ-agÂ-ine livÂ-ing four cenÂ-turies? SciÂ-enÂ-tists say theyâ€™ve found an anÂ-iÂ-mal that did just that: a quaÂ-hog clam, ArcÂ-tica isÂ-landica, that lived and grew in the cold waÂ-ters off IceÂ-landâ€™s north coast for at least that long.

When ShakeÂ-speare was writÂ-ing his greatÂ-est plays, the reÂ-searchÂ-ers sayâ€”when GiorÂ-daÂ-no BruÂ-no was burnt at the stake in Rome for claimÂ-ing inÂ-fiÂ-nite habÂ-itÂ-aÂ-ble worlds exÂ-istâ€”this molÂ-lusc was but a tenÂ-der youth, obÂ-livÂ-iÂ-ous to these deÂ-velÂ-opÂ-ments. Courtesy Bangor University

The GuinÂ-ness Book of Records gives the curÂ-rent recÂ-ord for longÂ-est-lived anÂ-iÂ-mal to anÂ-othÂ-er ArcÂ-tica clam, age 220, colÂ-lectÂ-ed in 1982 from AmerÂ-iÂ-can waÂ-ters. UnÂ-ofÂ-fiÂ-cialÂ-ly, the recÂ-ord beÂ-longs to a 374-year-old IceÂ-landÂ-ic clam found in a muÂ-seÂ-um. Both these recÂ-ords, the reÂ-searchÂ-ers said, seem to have been eclipsed by the latÂ-est specÂ-iÂ-men, whose age, 405 to 410 years, they asÂ-sessed by countÂ-ing anÂ-nuÂ-al growth lines on its shell.The sciÂ-enÂ-tists, from BanÂ-gor UnÂ-iversÂ-ity in the U.K., are scleÂ-roÂ-chroÂ-nolÂ-oÂ-gists, who study clam growth and age usÂ-ing growth lines much as denÂ-droÂ-chroÂ-nolÂ-oÂ-gists study tree growth usÂ-ing tree-rings. Clam shell growth is reÂ-latÂ-ed to enÂ-viÂ-ronÂ-menÂ-tal conÂ-diÂ-tiÂ-ons such as sea temÂ-perÂ-aÂ-ture, salinÂ-ity and food availÂ-abilÂ-ity. The BanÂ-gor team anÂ-aÂ-lyses the growth hisÂ-toÂ-ries to unÂ-derÂ-stand changes in the ocean linked to cliÂ-mate change.The clam was dredged up by Paul ButÂ-ler and James Scourse of the unÂ-iversÂ-ity durÂ-ing a reÂ-search cruise last year as part of a EuÂ-roÂ-peÂ-an UnÂ-ion inÂ-vesÂ-tiÂ-gÂ-atiÂ-on of hisÂ-torÂ-iÂ-cal cliÂ-mate changes. The disÂ-covÂ-ery was made by Al WanÂ-aÂ-maÂ-ker, the newÂ-est memÂ-ber of the unÂ-iversÂ-ityâ€™s â€œArcÂ-ticaâ€• team, said memÂ-ber Chris RichÂ-ardÂ-son. â€œAl and Paul rushed up to my ofÂ-fice to anÂ-nounce that they had found a recÂ-ord-breaker,â€• he reÂ-counted. FurÂ-ther exÂ-amÂ-inÂ-atiÂ-on, he said, conÂ-firmed the clam had beatÂ-en the preÂ-viÂ-ous recÂ-ord by three deÂ-cÂ-ades.Why do these clams live so long? The BanÂ-gor inÂ-vesÂ-tiÂ-gaÂ-tors beÂ-lieve the molÂ-luscs may have evolved exceptiÂ-onally strong defenses against deÂ-strucÂ-tive agÂ-ing proÂ-cesses. â€œIf, in ArcÂ-tica isÂ-landica, evolutiÂ-on has creÂ-atÂ-ed a modÂ-el of sucÂ-cessÂ-ful reÂ-sistÂ-ance to the damÂ-age of agÂ-ing, it is posÂ-siÂ-ble that an inÂ-vesÂ-tiÂ-gÂ-atiÂ-on of the tisÂ-sues of these real life MeÂ-thuÂ-seÂ-lahs might help us to unÂ-derÂ-stand the proÂ-cesses of agÂ-ing,â€• said RichÂ-ardÂ-son.

Courtesy Bangor University and World Science staff

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