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### New Research Shows Humans Could Outrun T. Rex

Posted by [BeauHD](#) on Wednesday July 19, 2017 @03:00AM from the [run-like-hell dept.](#)

[bongey](#) writes: *T-Rex would have a hard time even catching an average human running, much less Usain Bolt or Jeeps, without shattering their legs into pieces. New research based on simulations that include the load on the bones show that T-Rex would have a hard time running faster than 12 miles per hour (5.4 meters per second) without bones breaking. The new research correlates to speeds calculated from adolescence sized T-Rex dinosaur footprints in 2016, which showed walking speeds to be only 2-5mph, and estimated running speeds 11-18 mph.* Gizmodo notes that while T. rex was unable to pursue its prey at high speeds, high speed is a relative term. "For reference, typical humans can sprint anywhere between eight to 15 miles per hour (elite athletes can exceed 20 mph). So to outrun a T. rex, many animals -- or fictional humans -- would still have to run like hell."

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biology science bones

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0

**Objects in the mirror... (Score:2, Funny)**

By Anonymous Coward

...are slower than they appear

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**Scavenger (Score:4, Insightful)**

by [Lennie \(16154\)](#) on Wednesday July 19, 2017 @03:39AM ([#54837579](#))

While there seem to be a large number of people who keep thinking T-Rex is a hunter. Body to say, I'm more and more in the camp which suggest that T-Rex is more like a vulture. T-Rex has a big noose, have for long walks, not sprints, etc.

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**Bear? (Score:2)**

by [n329619 \(4901461\)](#)

You've got a way of thinking, which actually made me think. T-Rex might be close to a bear's behavior (grizzly bear to be exact). Grizzly bear isn't the fastest, but is surely one of the bigger if not biggest in the forest. They do pick off big prey but they also take / scavenge food from other predators like wolves. It seems like there are some similarity between T-Rex and Grizzly bear.

**Re: (Score:2)**

by [phayes \(202222\)](#)

Grizzly bears can outrun horses, elk and deer in many/some conditions which takes away from your thesis but they also take kills and carrion from wolves if the pack isn't too large. So T-Rex may have been apex predators that often/usually fed off of the kills of other predators. The ratio of often to usually has yet to be determined.

**Re: Scavenger (Score:3)**

by [Entrope \(68843\)](#)

Make Pangaea great again! T-Rex for president! (Yes, I know Pangaea broke up before the tyrannosaurs came along.)

**Re: (Score:3)**

by [Mr.D from 63 \(3395377\)](#)

I would think larger animals are either hunters or veg eaters. Huge scavengers might have a hard time finding enough food to fulfill their needs. Maybe there were enough large dead or injured things lying around, but I would expect scavengers to be on the smaller side.

How fast a person runs today in shoes on a flat surface in a straight line is one thing. How fast our ancestors ran in bare feet on rough terrain is another. I would assume humans had the ability to change directly more quickly than a T Rex

**Re: (Score:1)**

by [The Grim Reefer \(1162755\)](#)

I would assume humans had the ability to change directly more quickly than a T Rex, another important aspect of evasion. Humans are/can be very efficient killers. That's why very few apex predators intentionally hunt/attack humans. We kill each other and ourselves probably by several orders of magnitude more than all predators combined do. If there's a predator that eats humans in an area we want to be, we have typically exterminated most, if not all of them. Even if we don't, the only ones that survive either don't have a taste for humans, or tend to avoid people. Polar bears are the one exception that I'm aware of that will

**Re: (Score:2)**

by [DigiShaman \(671371\)](#)

Assuming it was possible, I've always wondered if that big tail would carry enough mass/momentum to swing and knock their prey off balance; maybe enough to brake *their* legs (not the T-Rex's).

**Re: (Score:2)**

by [omfglearntoplay \(1163771\)](#)

T-rex was definitely a hunter. They've found more than one example of T-rex teeth scars in triceratops that survived and had the scars heal over proving that the triceratops lived through the battle and healed up. You can't tell me the mama T-rex was defending her babies from a carnivorous triceratops, and almost all dino experts say T-rex was a hunter with such evidence. Here is a link citing an embedded T-rex tooth in a hadrosaur, so you can't say it was another animal that attacked. <https://www.theguardian.com> [theguardian.com]

**Jabba... (Score:1)**

by Anonymous Coward

And since not everyone is a top athlete, most of us would become a T-rex snack. Most people can't even do 10mph.

**Re:Jabba... (Score:5, Insightful)**

by [Xenx \(2211586\)](#) on Wednesday July 19, 2017 @04:11AM ([#54837639](#))

If running from a T-Rex was an actual concern, I would venture most people would be fit enough to pull it off.

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**I didn't read the article and just skimmed TFS... (Score:2)**

by [Black.Shuck \(704538\)](#)

So is the calculated running speed a sprint, or something a bit more like an endurance effort? I mean, I'm sure many of us could outrun a t-rex. For about 30 seconds, at which point our lungs will start imploding and rexy gets an easy, wheezy meal.

[1 hidden comment](#)

**Re: (Score:3)**

by [h33t14x0r \(4107715\)](#)

Most Americans? Hardly. Too many soft drinks.

**Re: (Score:2)**

by [dcw3 \(649211\)](#)

Most Americans? Hardly. Too many soft drinks. But, but, they give you wings!!!

**Re: (Score:3)**

by [mjwx \(966435\)](#)

If running from a T-Rex was an actual concern, I would venture most people would be fit enough to pull it off. You don't have to run faster than the T-Rex, you have to run faster than the other people running.

The T-Rex may have been capable of short burst of greater speed, similar to Crocodiles that can more at quite a fair clip to attack, but most of the time move rather ponderously.

**Re: (Score:1)**

by [dffuller \(200455\)](#)

So, survival of the fittest?

**Re: (Score:2)**

by [mjwx \(966435\)](#)

So, survival of the fittest? It is not the strongest or fastest of the snacks that survive, but the one who kneecaps the others.

**Re: (Score:2)**

by [Deadstick \(535032\)](#)

Wonder how Olympic running records would be affected if a T. Rex were one of the starters...

**Re: (Score:2)**

by [ausekilis \(1513635\)](#)

There's a shirt for that. [Exercise, some motivation required](#) [woot.com]

**Re: (Score:2)**

by [Ian A. Shill \(2791091\)](#)

Or they wouldn't.

**Re: (Score:2)**

by [DontBeAMoran \(4843879\)](#)

Humans on bicycles.

**Re: (Score:2)**

by [93 Escort Wagon \(326346\)](#)

And since not everyone is a top athlete, most of us would become a T-rex snack. Not true. With those puny forelegs of his, I imagine he wouldn't be able to get at us Slashdotters - safely ensconced in our mom's basements.

**Re: (Score:2)**

by [hawguy \(1600213\)](#)

And since not everyone is a top athlete, most of us would become a T-rex snack. Not true. With those puny forelegs of his, I imagine he wouldn't be able to get at us Slashdotters - safely ensconced in our mom's basements. Speak for yourself! Not everyone here fits that slashdot nerd, living in mom's basement stereotype. I live over my mom's garage, a T-rex could easily reach in grab me.

**Re: (Score:2)**

by [penandpaper \(2463226\)](#)

OOO a rebel. I live in my mom's attic. I am pretty much Rex meat.

**Re: (Score:1)**

by [edxwelch \(600979\)](#)

Not a problem. You only need to run faster than they guy next to you.

**Re: (Score:2)**

by [\(4475953\)](#)

It's especially hard to run 10mph in a forest, with lots of flowers, plants and rivers in your way...

**One Swallow Does Not A Summer Make (Score:5, Informative)**

by [ytene \(4376651\)](#) on Wednesday July 19, 2017 @03:49AM ([#54837603](#))

If you click through and read the article, you will find a discussion that explains that this entire conclusion was based on a **rare** set of footprints that were found to be of a certain spacing. They then started a variety of different extrapolations, covering values such as estimating the height of the dinosaur's hips above the ground, the weight of the dinosaur and so on.

Their determination that this set of tracks came from a Tyrannosaur was made on the basis that there is no knowledge of any other matching species in that area at that time.

Having measured the stride of this dinosaur and estimated the height of its hips above the ground, they then used measurements taken from "living, walking bipeds" to make their claim.

Now, I'm all in favour of scientific research and analysis. I love reading about cutting edge insights to the world around us. I think it enriches our lives. On the other hand, when I read this article published on the Science website, the first thought that came to me was, "There are an awful lot of assumptions and approximations in here..."

They don't know, definitively, that this was a T-Rex. They don't know what it was doing at the time the tracks were made [for example, if it had been stalking prey, maybe it was treading softly, moving slowly, so perhaps it's steps were uncharacteristic. They don't know whether it was injured, or weak, or unwell. You can't determine the nutritional state of a hundreds-of-millions-of-years-dead dinosaur from a footprint, can you? They are also assuming that things like the metabolic efficiency, the muscular strength and even the bone density




If dinosaurs are all perfectly equivalent to what we see today. In other words, they are cherry-picking facts to fit their theories.

I am absolutely certain that there is some great research and excellent work being undertaken by the Team that made this announcement, but this is far, far short of science. This is assumption and theory and conjecture based upon an entirely incomplete fact base.

In one sense it is not worth being concerned over one-off articles like this. In the fullness of time we would expect scientific peer review to challenge and refine both the method of analysis and the final conclusions of this piece of work. Well, hopefully. The concern with this specific story is evidenced by the fact that it has been picked up and linked here, on slashdot. Which means it will be picked up by other science and tech news outlets and perhaps even broader news media. This is fine if the original work is robust and defensible, but in this case [at least as far as the original piece goes] that does not appear to be true... Oh well.

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**Re: (Score:2, Insightful)**

by Anonymous Coward

This post is both everything right and wrong with science commentary today. Everything you posted is completely correct, and you've done a very good job explaining how to critically think about the assumptions and approximations inherent to an analysis. But...

What is your proposed way to more accurately measure how fast a T-Rex can run?

This is the best effort, to date, to reasonably and scientifically arrive at an estimate. If you have a better idea, do it!

That's how the field of science improves - someone

**Re:One Swallow Does Not A Summer Make (Score:5, Interesting)**

by [phayes \( 202222 \)](#) on Wednesday July 19, 2017 @05:35AM ([#54837803](#)) [Homepage](#)

Sometimes the best answer to some questions is "that cannot be determined with the available facts" and that indeed seems to be the case here.

Their methodology in determining the speed of a (assumed healthy) T-Rex (assumed to be) walking at it's best speed contains too many assumptions that cannot be proven to be reliable. The parable of the blind men that each examined a different part of an elephant and gave different descriptions applies here -- It's a wall said the one that touched it's ribcage, no it's a tree-trunk, said the one that touched it's foot/leg, no, it's a spear said the one who touched a tusk, etc.

Their work is of some interest and may indeed help to determine T-Rex's top speed -- if it is corroborated with other sources that do not use the same assumptions.

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**Re: (Score:2)**

by [ytene \( 4376651 \)](#)

This is exactly the point.

The danger is that if we accept a scientific analysis which over-reaches the facts, then we are at risk of encouraging this behaviour.

If we let supposition stand and, to borrow a line from "Dead Poets Society", we "let rumour fester into fact..." then we actually undermine the credibility of the entire scientific process. I am sorry if that comes across as a provocative or controversial claim to make, but I just think that with something like this, it's better to be cautious

**Re: One Swallow Does Not A Summer Make (Score:1)**

by Anonymous Coward

Parent is right - it is scientifically OK to give your best estimates and the base of those estimates: data, process, caveats etc.

Within the remaining I uncertainties, it is also OK to favor one explanation over another, if it fits the facts, even if it's not certain, or the only possible explanation (e.g. if the other explanation also fits the facts equally well). What you're publishing, as a scientist, is (a) data, then (b) a plausible opinion around that data.

Fellow scientists who know hie to read a publ

**Re: (Score:2)**

by [dcw3 \( 649211 \)](#)

Sometimes the best answer to some questions is "that cannot be determined with the available facts" and that indeed seems to be the case here.

This! But how often do we hear of a study that doesn't come to decisive conclusions? That would not likely be good for future funding. It's fine if they're going to say..."we think it might be x because of y, and we made these assumptions". But to come out and say...most humans could outrun a T-Rex is simply bad science or poor reporting, or both.

**Re: (Score:3)**

by [TheRaven64 \( 641858 \)](#)

Most things about dinosaurs need to be taken with a very large pinch of salt, because you're often extrapolating entire species from under half a dozen samples of skeletons. The problem is in the translation from the scientific paper to the mainstream news. The first will list all of the caveats and the limits of their model (or be published somewhere crap and ignored by most researchers), the latter will present it as truth.

One of the big problems for our society is that we often teach science as a re

1 hidden comment

**Re: (Score:2)**

by [gtall \( 79522 \)](#)

We also tend to teach religion as a science. The museum in Kentucky reputedly has humans riding dinosaurs based on no evidence at all. Now that's some fancy science!

**Re: (Score:2)**

by [penandpaper \( 2463226 \)](#)

humans riding dinosaurs based on no evidence at all

Oh really? Then explain [this!](#) [youtube.com] Checkmate atheists.

**Re: (Score:2, Informative)**

by Anonymous Coward

You simply paraphrased (rather poorly) what the article clearly says.

>The analysis doesn't prove that T. Rex couldn't have gone faster, however. Because trackways are records of single eventsâ"one walk along a lakeshore, for exampleâ"the odds are that any particular set of footprints doesnâ(TM)t capture a dinosaurâ(TM)s peak performance, says Thomas Holtz Jr., a vertebrate paleontologist at the University of Maryland, College Park. Moreover, he notes, the types of sediment that are go

**Re: (Score:2)**

by [Jason Levine \( 196982 \)](#)

They don't know what it was doing at the time the tracks were made [for example, if it had been stalking prey, maybe it was treading softly, moving slowly, so perhaps it's steps were uncharacteristic. Very good point. Imagine if - millions of years from now - a cheetah's footprints were examined by archaeologists of that era. The prints show an animal walking very slowly and carefully. They might conclude that the cheetah was a slow predator, unable to run at fast speeds. Of course, they'd be wrong. The chee

**Re: (Score:2)**

by [pkphilip \( 6861 \)](#)

The propensity to jump to conclusions is not new. See this "research" which concluded that T-Rex's are cannibals based on a SINGLE bite mark which they found on a T-Rex: <https://www.theguardian.com/sc...> [theguardian.com] This is the paper: <http://journals.plos.org/ploso...> [plos.org]

**Cube-square law strikes again (Score:1)**

by [Cyberax \( 705495 \)](#)

Duh. Why would a TRex want to run fast? It would be far more dangerous for them than pretty much anything else - a single stumble will likely result in broken bones and death from starvation.

**"We've clocked the t-rex at 32 miles per hour." (Score:2)**

by [Black.Shuck \( 704538 \)](#)

They just [need a bit of help](#) [imgur.com].

**Humans Could Outrun T. Rex (Score:2)**

by [n329619 \( 4901461 \)](#)

"Marathon runners can average 8.8mph for 26.2 miles" (from google)

Turtles < Normal Person < Marathon runners

0.2mph < Normal Person < 8.8mph

11mph < T-Rex < 15mph

We're still screwed aren't we?

1 hidden comment

**Re: (Score:2)**

by [allcoolnameswheretak \( 1102727 \)](#)

I don't agree. Turtles are a major threat to our ecosystem and all living life on the planet:

Ducks are birds and birds where dinosaurs. So:

Duck == Bird ^ = Dinosaur

Turtles eat baby ducks. And since we have established that duck ^ = dinosaur, the following statement can be resolved via mathematical induction:

Turtles eat baby ducks ^ = Turtle eats Dinosaur

Incidentally, T-Rex is extinct, ergo:

Turtle > T-Rex

Quod erat demonstrantum.

**Re: (Score:3)**

by [TheRaven64 \( 641858 \)](#)

Marathon runners run quite slowly, because they have to keep going for hours. This is how primitive humans caught their prey: not by being faster, but by having a lot more stamina and keeping catching up and forcing the prey to spring until it reached exhaustion. Most humans can run for short periods a lot faster than they can jog a marathon. That said, 15mph is a 4 minute mile, which under a thousand humans have ever done, so if the T. Rex doesn't give up after about 30 seconds then you're probably goin

1 hidden comment

**Re: (Score:2)**

by [gtall \( 79522 \)](#)

And if they were smart humans, they waiting until the prey moved close to them, jumped out from behind a rock and startled the prey so that it had a heart attack. Then dragged said prey home.

**Re: (Score:2)**

by [SlaveToTheGrind \( 546262 \)](#)

You're confusing average sustained speed over long distances (26.2 miles of running) with top speed.(shorter sprints). I read TFA as speculating on T-Rex's maximum speed (the "without bones breaking" part). As noted, top athletes sprint at well over 20mph, and even lesser mortals can make it into the double digits.

**Re: (Score:2)**

by [dcw3 \( 649211 \)](#)

Your marathon joggers go 8.8mph. World class is in the 12-13mph range.

**You must be joking (Score:4, Insightful)**

by [Viol8 \( 599362 \)](#) on Wednesday July 19, 2017 @05:54AM ([#54837849](#)) [Homepage](#)

I'm really not convinced by these arguments that our ancestors were somehow multi marathon fit and could run down anything on the plain. No native peoples today do that - they wound first with spears or arrows then follow it until it dies, they don't wear it down physically!

As for running down a horse, you must be joking. Horses can gallop then trot for hours, long after even the fittest marathon runner would be in a sweaty heap on the ground panting like dog. And unless you're a first class tracker you're never going to find that horse that has probably put 10 miles between you and him in the first hour.

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**Re: (Score:2)**

by [Viol8 \( 599362 \)](#)

Hundreds of fit marathon runners vs nothing special horses over rough ground that favours 2 legs.

Now lets try it over flat grassland and what happens? Oh yeah, you get the Pony Express. I wonder why they didn't just get men to run with the post instead?

**Re: (Score:1)**

by Anonymous Coward

Now lets try it over flat grassland and what happens? Oh yeah, you get the Pony Express. I wonder why they didn't just get men to run with the post instead?

Bad example. The Pony Express was a relay system. Horses were continuously swapped out for fresh ones. There are plenty of counter-examples of societies that used human runners for messages. You might, for example, look into why a Marathon is-called a marathon.

**Re: (Score:2)**

by [Viol8 \( 599362 \)](#)

Yes, it was a relay system, but the horse still ran the distance way faster than any man could. As for the original marathon - legend had it he dropped dead after delivering his message. Not a great advert for it.

**Re: (Score:2, Interesting)**

by Anonymous Coward

Sir David Attenborough would like a word with you.

[https://www.youtube.com/watch?v=826HMLoiE\\_o](https://www.youtube.com/watch?v=826HMLoiE_o)

It's not about running constantly behind the prey, it's about running it into places it can't perform to its fullest and never letting it rest. Most prey animals (young, sick, injured) are already wheezing after their first good sprint, the rest of the pursuit is making sure it can't reach somewhere to rest and cool off and occurs at a much more reasonable pace. Then when you've finally broken the animal you make

**Re: (Score:2)**

by [avandesande \( 143899 \)](#)

Sweat glands and bipedal we can run down anything

**Re: (Score:3)**

by [Trailer Trash \( 60756 \)](#)

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As for running down a horse, you must be joking. Horses can gallop then trot for hours, long after even the fittest marathon runner would be in a sweaty heap on the ground panting like dog. And unless you're a first class tracker you're never going to find that horse that has probably put 10 miles between you and him in the first hour.

In the epilogue to the book "Black Elk Speaks" the author describes how the tribe that he was studying made moccasins. This describes "endurance hunting" while also shattering the silly myth that the American Indians weren't wasteful.

The story is about an Indian in his 60s who needed a new pair of moccasins. The moccasins were made of deer hide, and you had to hunt and kill the deer yourself. Nothing else was done with the deer - the entire carcass was left to rot. Only the skin for the moccasins was tak

**Endurance Hunting (Score:2)**

by [Tenebrousedge \( 1226584 \)](#)

I would leave the carcass of any animal that had been run to death, too. It's definitely not going to taste great after that.

**Re: (Score:2)**

by [dcw3 \( 649211 \)](#)

...then meters per seconds. Totally useless units in such an article if youâ(TM)re not from the US of A. Then don't come to a US hosted site and whine about the use of our standards. Even if they are stupid...which I'll agree to.

**mph or m/s? (Score:1)**

by Anonymous Coward

OK, I am a trained physicist and use SI all the time, but I'd never use it for specifying land speed. How out of touch with the world can you be to give mph (which, seriously, you should switch from at some point) and m/s as an alternative?

**I'm fortunate... (Score:2)**

by [creimer \( 824291 \)](#)

That I can walk faster than a walking T-Rex. Outrunning a running T-Rex might be more problematic.

1 hidden comment

**First they need to prove their model (Score:2)**

by [140Mandak262Jamuna \( 970587 \)](#)

Use the bone cross section area, max allowable stress, impact load, weight of the animal, (do not use rare foot



