

Grandparents have no idea why they're out in the cold

DEAR ABBY: My brother "Brian" and his wife, "Laurel," have an adult son, "Dick," who dated a girl I'll call "Crystal" for 10 years before they got married. Everyone got along fine, until Crystal gave birth.



DEAR ABBY

After their first child was born, Crystal started withholding visits from my brother and his wife. Crystal and Dick had two more children. The oldest is now 6. The only way Brian and Laurel see their grandchildren is if there's a family reunion, wedding, etc. Crystal allows her parents to see the kids and spend time with them.

bergasted by what has happened. They have no idea why all of a sudden after giving birth, their DIL has not allowed them to visit the grandkids, babysit or anything. My brother and his wife are great people. They don't drink to excess or use drugs and

would be wonderful grandparents for these children. Would it be appropriate as a family member (aunt) to write a letter to Crystal and, in a kind, nonaccusatory way, explain the hurt this has caused and how much their children are missing out from not being around these two great individuals?

—MISSING OUT

DEAR MISSING OUT: While it isn't unheard of for the wife's parents to take precedence over the husband's, Crystal's behavior does appear to be extreme. It also appears the way she's acting is retaliatory, but the people who must get to the bottom of it are your brother and his wife. I don't think there is anything to be gained by involving yourself in this sad mess, because if you do, Crystal and her husband will resent it. Sympathize, but stay out of it.

DEAR ABBY: Five years ago, my daughter, "Angie," and her two children moved in with me after she and her husband separated. I hoped she would get her finances and life together and be able to get a place of her own. What I didn't realize at the

time was that Angie had started a relationship with a man she met online. Her daughter was very upset about it. Angie was in a custody dispute over her youngest child, and we disagreed more than once about issues concerning the children.

After a couple of years, she moved into her own place. She's still involved with this man. I haven't met him and have no desire to. She's upset with me because of it. I don't want to see him with her because he has been married several times and is involved with drugs. I realize who Angie is involved with is her business and not mine, but I want nothing to do with him. How can I avoid a rift with her over this?

—SOURD

DEAR SOURD: No law says you HAVE to meet him, and it is your privilege to avoid him if you wish. I'm not sure what your daughter expects from you. Does she want you to entertain him? Common sense would dictate that you do not want anyone who is involved with illegal substances in your home. However, I do think you should agree to meet him once.

If Angie's relationship with you is predicated on the idea that you will welcome this individual into your life with open arms because she has, you will then have to figure out how to navigate this. That she would allow someone like him to interact with her children shows very poor judgment.

NEWS OF THE WEIRD

Can't crush this: Beetle armor gives clues to tougher planes

By Marion Renault
Associated Press

NEW YORK — It's a beetle that can withstand bird pecks, animal stomps and even being rolled over by a Toyota Camry. Now scientists are studying what the bug's crush-resistant shell could teach them about designing stronger planes and buildings.

"This beetle is super tough," said Purdue University civil engineer Pablo Zavattieri, who was among a group of researchers that ran over the insect with a car as part of a new study.

So, how does the seemingly indestructible insect do it? The species — aptly named diabolical ironclad beetle — owes its might to an unusual armor that is layered and pieced together like a jigsaw, according to the study by Zavattieri and his colleagues published in Nature on Wednesday, Oct. 21. And its design, they say, could help inspire more durable structures and vehicles.

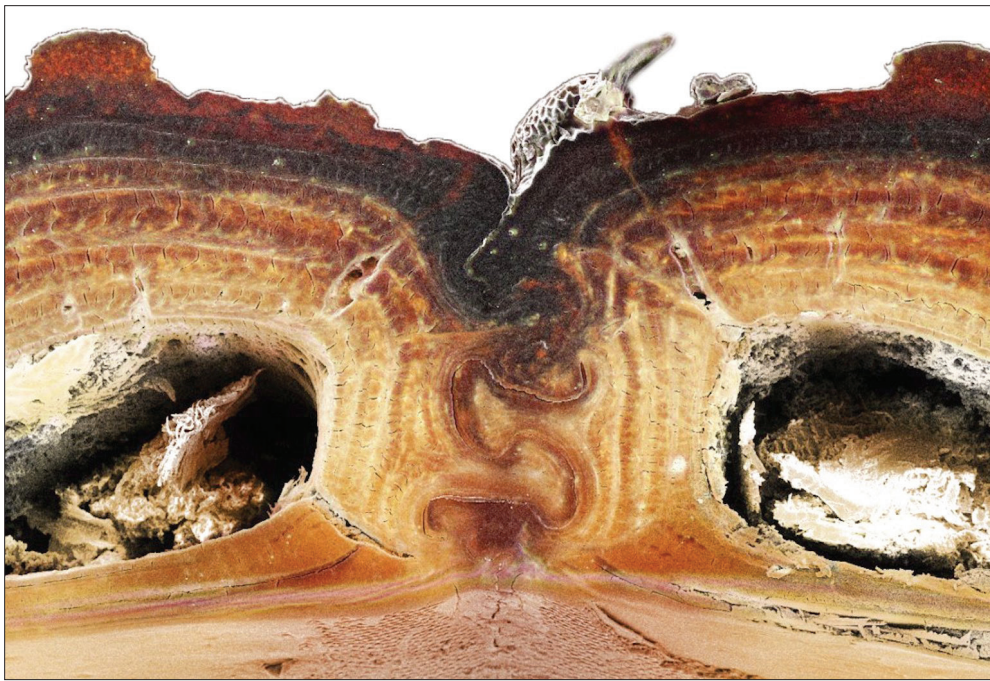
To understand what gives the inch-long beetle its strength, researchers first tested how much squishing it could take. The species, which can be found in Southern California's woodlands, withstood compression of about 39,000 times its own weight.

For a 200-pound man, that would be like surviving a 7.8-million-pound crush.

Other local beetle species shattered under one-third as much pressure.



Jesus Rivera/Kisailus Biomimetics and Nanostructured Materials Lab, University of California Irvine via AP



Researchers then used electron microscopes and CT scans to examine the beetle's exoskeleton and figure out what made it so strong.

As is often the case for flightless beetles, the species' elytra — a protective case that normally sheaths wings — had strengthened and toughened over time.

Up close, scientists realized this cover also benefited from special, jigsaw-like bindings and a layered architecture. When compressed, they

Above, this 2016 photo shows a diabolical ironclad beetle, which can withstand being crushed by forces almost 40,000 times its body weight and are native to desert habitats in Southern California. Scientists say the armor of the seemingly indestructible beetle could offer clues for designing stronger planes and buildings. At left, a cross-section of the beetle's carapace shows the configuration that's among the keys to the insect's durability. In a study published Wednesday, Oct. 21, 2020, in the journal Nature, scientists explain why the beetle is so squash-resistant.

found the structure fractured slowly instead of snapping all at once. "When you pull them apart," Zavattieri said, "it doesn't break catastrophically. It just deforms a little bit. That's crucial for the beetle."

It could also be useful for engineers who design aircrafts and other vehicles and buildings with a variety of materials such as steel, plastic and plaster. Currently, engineers rely on pins, bolts, welding and adhesives to hold everything together. But those techniques can be prone to degrading.

In the structure of the beetle's shell, nature offers an "interesting and elegant" alternative, Zavattieri said. Because the beetle-inspired design fractures in a gradual and predictable way, cracks could be more reliably inspected for safety, said Po-Yu Chen, an engineer at Taiwan's National Tsing Hua University not involved in the research.

The beetle study is part of an \$8 million project funded by the U.S. Air Force to explore how the biology of creatures such as mantis shrimp and bighorn sheep could help develop impact-resistant materials. "We're trying to go beyond what nature has done," said study co-author David Kisailus, a materials scientist and engineer at the University of California, Irvine.

The research is the latest effort to borrow from the natural world to solve human problems, said Brown University evolutionary biologist Colin Donihue, who was not involved in the study. Velcro, for example, was inspired by the hook-like structure of plant burrs.

weather

	TONIGHT	FRI	SAT	SUN	MON
	Mainly clear	A shower in the afternoon	Partial sunshine	Mostly sunny and pleasant	Sunny and delightful
Baker City	28	65 30	60 28	60 28	63 30
La Grande	35	59 33	54 28	60 35	61 35
Enterprise	39	57 30	52 32	60 36	63 36

Comfort Index takes into account how the weather will feel based on a combination of factors. A rating of 10 feels very comfortable while a rating of 0 feels very uncomfortable.

ALMANAC			
TEMPERATURES			
High Tuesday	63°	60°	62°
Low Tuesday	17°	18°	19°
PRECIPITATION (inches)			
Tuesday	0.00	0.00	0.00
Month to date	0.01	0.49	2.94
Normal month to date	0.53	1.07	1.38
Year to date	3.00	13.88	28.98
Normal year to date	8.17	12.65	17.31

AGRICULTURAL INFO.	
HAY INFORMATION FRIDAY	
Lowest relative humidity	35%
Afternoon wind	WNW at 7 to 14 mph
Hours of sunshine	8.2
Evapotranspiration	0.08

RESERVOIR STORAGE (through midnight Wednesday)	
Phillips Reservoir	8% of capacity
Unity Reservoir	23% of capacity
Owyhee Reservoir	42% of capacity
McKay Reservoir	31% of capacity
Wallowa Lake	16% of capacity
Thief Valley Reservoir	10% of capacity

STREAM FLOWS (through midnight Tuesday)	
Grande Ronde at Troy	974 cfs
Thief Valley Reservoir near North Powder	0 cfs
Burnt River near Unity	16 cfs
Umatilla River near Gibbon	53 cfs
Minam River at Minam	99 cfs
Powder River near Richland	16 cfs

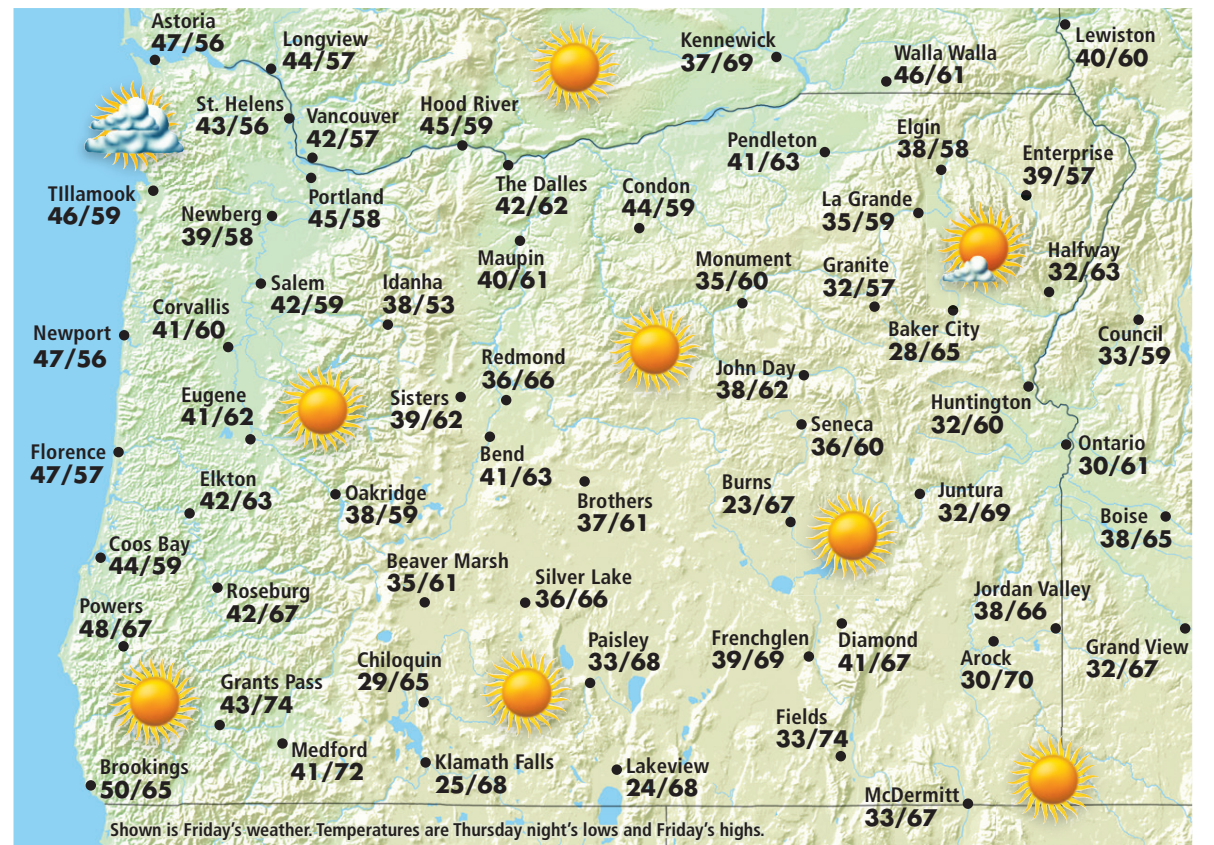
TUESDAY EXTREMES		
NATION (for the 48 contiguous states)		
High: 92°	Tampa, Fla.	
Low: -28°	Walden, Colo.	
Wettest: 1.64"	Panama City, Fla.	
OREGON		
High: 78°	Brookings	
Low: 12°	Odell Lake	
Wettest: none		

WEATHER HISTORY
On Oct. 29, 1991, a storm dumped up to a foot of snow in Utah. Another storm dropped nearly 5 inches of rain on Little Rock, Ark. A third storm sank boats along the Massachusetts coast.

SUN & MOON		
THU.	FRI.	
Sunrise	7:28 a.m.	7:29 a.m.
Sunset	5:44 p.m.	5:42 p.m.
Moonrise	5:23 p.m.	5:42 p.m.
Moonset	5:20 a.m.	6:22 a.m.

MOON PHASES			
Full	Last	New	First
Oct 31	Nov 8	Nov 14	Nov 21

AROUND OREGON AND THE REGION



REGIONAL CITIES					
City	FRI. HI/Lo/W	SAT. HI/Lo/W	City	FRI. HI/Lo/W	SAT. HI/Lo/W
Astoria	56/39/r	57/40/pc	Lewiston	60/39/pc	55/39/pc
Bend	63/33/pc	61/29/pc	Longview	57/35/r	57/35/pc
Boise	65/36/s	59/37/s	Meacham	57/32/pc	53/29/pc
Brookings	65/50/c	65/49/s	Medford	72/42/s	73/41/s
Burns	67/26/s	60/24/s	Newport	56/42/r	57/42/c
Coos Bay	59/45/pc	60/43/s	Olympia	57/36/sh	55/38/pc
Corvallis	60/39/c	60/36/pc	Ontario	61/36/s	60/32/s
Council	59/32/pc	57/30/pc	Pasco	69/34/pc	59/34/pc
Elgin	58/36/pc	54/30/pc	Pendleton	63/37/pc	58/34/pc
Eugene	62/41/c	60/36/pc	Portland	58/41/sh	59/40/pc
Hermiston	66/35/pc	59/33/pc	Powers	67/47/pc	70/44/s
Hood River	59/35/c	58/35/pc	Redmond	66/31/pc	63/28/s
Imnaha	62/34/pc	58/35/pc	Roseburg	67/48/c	66/42/s
John Day	62/34/pc	61/36/pc	Salem	59/38/c	59/37/c
Joseph	57/29/r	52/33/pc	Spokane	54/33/c	49/33/pc
Kennewick	69/34/pc	58/33/pc	The Dalles	62/38/pc	60/37/pc
Klamath Falls	68/28/s	66/28/s	Ukiah	57/30/pc	55/30/pc
Lakeview	68/25/pc	67/26/s	Walla Walla	61/40/pc	56/38/pc

RECREATION FORECAST FRIDAY			
ANTHONY LAKES	Cooler	43	25
MT. EMILY REC.	Cooler	49	31
EAGLE CAP WILD.	Partly sunny	47	21
WALLOWA LAKE	Rain and drizzle	57	29
THIEF VALLEY RES.	Partly sunny; mild	65	30
PHILLIPS LAKE	Partly sunny	58	27
BROWNLEE RES.	Partly sunny	62	35
EMIGRANT ST. PARK	Cooler	54	28
MCKAY RESERVOIR	Partly sunny	64	37
RED BRIDGE ST. PARK	A p.m. shower	59	33