**night,** rain, heavy at times, windy and mild, low 52. **Tomorrow,** breezy

in the morning, decreasing clouds, high 56. Weather map is on Page 22.

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SUNDAY, DECEMBER 29, 2024

Prices in Canada may be higher

### By HIROKO TABUCHI

In early 2000, scientists at 3M, the chemicals giant, made a startling discovery: High levels of PFAS, the virtually indestructible "forever chemicals" used in nonstick pans, stain-resistant carpets and many other products were turning up in the nation's sewage.

The researchers were concerned. The data suggested that the toxic chemicals, made by 3M, were fast becoming ubiquitous in the environment. The company's research had already linked exposure to birth defects, cancer and

That sewage was being used as fertilizer on farmland nationwide, a practice encouraged by the Environmental Protection Agency. The presence of PFAS in the sewage meant those chemicals were being unwittingly spread on fields across the country.

3M didn't publish the research, but the company did share its findings with the E.P.A. at a 2003 meeting, according to 3M documents reviewed by the The New York Times. The research and the E.P.A.'s knowledge of it has not been previously reported.

Today, the E.P.A. continues to promote sewage sludge as fertilizer and doesn't require testing for PFAS, despite the fact that whistle-blowers, academics, state officials and the agency's internal studies over the years have also

"These are highly complex mix-tures of chemicals," said David sludge on farmland.

permanently contaminated," he said in a recent interview from his home in Georgia.

The concerns raised by Dr. Lewis and others went unheeded at the time.

The country is starting to wake up to the consequences. PFAS, which stands for per- and polyfluoroalkyl substances, has been detected in sewage sludge, on land treated with sludge fertilizer across the country, and in milk

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# **ISRAELI AGENCIES** BURROWED DEEP INTO HEZBOLLAH

## IRAN PROXY DECIMATED

## Years of Intelligence Led to Pager Blasts and Nasrallah Killing

This article is by Mark Mazzetti, Sheera Frenkel and Ronen Bergman.

TEL AVIV — Right up until he was assassinated, Hassan Nasrallah did not believe that Israel would kill him.

As he hunkered inside a Hezbollah fortress 40 feet underground on Sept. 27, his aides urged him to go to a safer location. Mr. Nasrallah brushed it off, according to intelligence collected by Israel and shared later with Western allies. In his view, Israel had no interest in a full-scale war.

What he did not realize was that Israeli spy agencies were tracking his every movement — and had been doing so for years.

Not long after, Israeli F-15 jets dropped thousands of pounds of explosives, obliterating the bunker in a blast that buried Mr. Nasrallah and other top Hezbollah commanders. The next day, Mr. Nasrallah's body was found in an embrace with a top Iranian general based in Lebanon. Both men died of suffocation, the intelligence found, according to several people with knowledge of it.

The death of Hezbollah's feared leader, who for decades commanded a Lebanese militia in its fight against the Israeli state, was the culmination of a two-week offensive. The campaign combined covert technological wizardry with brute military force, including remote detonation of explosives hidden in thousands of pagers and walkie-talkies used by Hezbollah, as well as a withering aerial bombardment with the aim of destroying thousands of missiles and rockets capable of hitting

It was also the result of two decades of methodical intelligence work in preparation for an all-out war that many expected would eventually come. A New York Times investigation, based on in-

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## Despite Risks, E.P.A. Backs Toxic Fertilizer

## Alerted About 'Forever Chemicals' in 2003

raised contamination concerns.

Lewis, a former E.P.A. microbiologist who in the late 1990s issued warnings of the risks in spreading The soil "becomes essentially

## Pouring On the Razzle-Dazzle To Entice the BookTok Faithful

## By ALEXANDRA ALTER

Last year, a romance publisher took an expensive gamble on the latest novel by the best-selling au-

thor Rebecca Yarros To help the novel, "Fourth Wing," stand out in the crowded fantasy-romance genre, the publisher, Entangled, invested in a limited deluxe edition with a bold metallic cover and black sprayed

edges featuring dragons. It worked: All 115,000 copies of the deluxe edition sold out almost everywhere within a week.

"My only regret is that I printed too few," said Liz Pelletier, Entangled's publisher.

When the next novel in the series, "Iron Flame," came out, Entangled was prepared, and printed a million copies of the deluxe edition. Once again, they quickly sold out.

For the third book in the series, "Onyx Storm," which comes out in January, Entangled is printing two million copies of the deluxe edition, which has stenciled artwork and black and silver edges adorned with flying gold and black dragons, along with a smaller print run of 500,000 standard copies. More than a million "Onvx Storm" deluxe editions have already sold. After realizing there was an enormous appetite for spe-



More books are getting the deluxe treatment with embellishments like spray-painted edges and stenciled artwork.

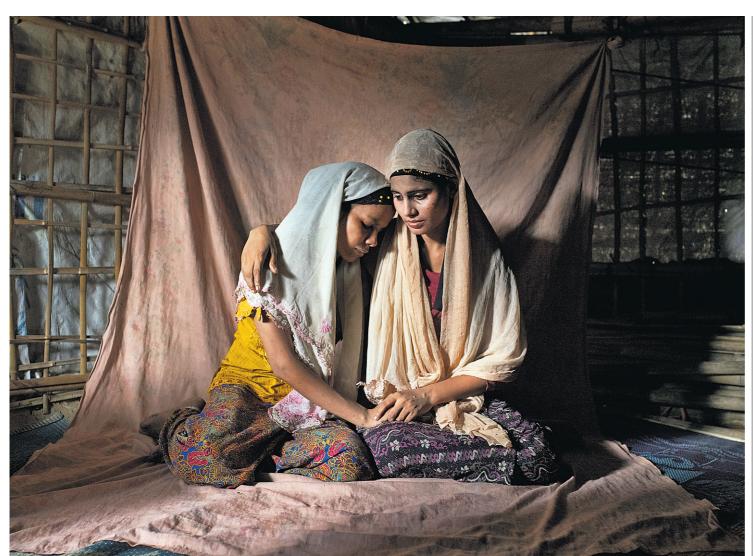
cial editions, Entangled has started giving the deluxe, sprayed-edge treatment to most

of its books, Pelletier said. "Now, to not spray-paint the edges would send the wrong kind

of signal, that a book is not worth collecting," she said.

After gaining popularity with romance and fantasy readers, heavily adorned editions have spread throughout the publishing industry. Publishers are investing in colorful patterned edges, metallic foil covers, reversible jackets, elaborate artwork on the endpa-

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### 'Everyone Hates Us, but I Don't Know Why'

Shamshida, left, and Manwara are among the Rohingya Muslim refugees who are trapped in a new round of ethnic violence. Page 8.

# FOR FLIGHT CRASH

### Stops Short of Claiming Responsibility

### By ANATOLY KURMANAEV

BERLIN - President Vladimir V. Putin of Russia on Saturday apologized for the crash of an Azerbaijan Airlines plane this past week, breaking the Kremlin's three-day silence on the accident that killed 38 people. He did not explicitly acknowledge Russia's responsibility for the crash.

Mr. Putin "offered his apologies" for the crash in a phone call to his Azerbaijani counterpart, Ilham Aliyev, the Kremlin said in a statement. Mr. Putin initiated the phone call, according to the statement, and told Mr. Aliyev "that the tragic incident took place in Russian airspace."

Mr. Putin said that as the plane approached its scheduled destination of Grozny, in southern Russia, Russian air defenses had begun to repulse an attack by Ukrainian drones on the Grozny airport and others nearby, according to the Kremlin.

Aviation experts and U.S. officials believe a Russian air-defense missile may have mistakenly downed the passenger jet. The Kremlin statement stopped short of attributing the crash to a Russian missile, but in its own statement acknowledging the apology, Azerbaijan's presidential office suggested that was indeed the cause.

"President Ilham Aliyev emphasized that the Azerbaijan Airlines passenger plane encountered external physical and technical interference while in Russian airspace, resulting in a complete loss of control," Azerbaijan's presidential office said in the statement on Saturday. The plane "was able to make an emergency landing solely due to the courage and professionalism of the pilots," the statement added.

Mr. Aliyev called for a thorough investigation and for "ensuring those responsible are held accountable.

The Embraer 190 airliner was traveling from Baku, Azerbaijan, to Grozny, but was diverted from its path. It eventually crashed in

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# PUTIN APOLOGIZES | Mexican Cartel's Fatal Fentanyl Experiments

### By NATALIE KITROEFF and PAULINA VILLEGAS

CULIACÁN, Mexico - The cartel operatives came to the homeless encampment carrying syringes filled with their latest fentanyl formula. The offer was simple, according to two men living at the camp in northwest Mexico: up to \$30 for anyone willing to inject themselves with the concoction.

One of the men, Pedro López Camacho, said he volunteered repeatedly — at times the operatives were visiting every day. They watched the drug take effect, Mr. López Camacho said,

## Hens and Humans Are Used to Test Drugs

snapping photos and filming his reaction. He survived, but he said he saw many others who did not.

"When it's really strong, it knocks you out or kills you," said Mr. López Camacho of the drugs he and others were given. "The people here died."

This is how far Mexican cartels will go to dominate the fentanyl

Global efforts to crack down on

the synthetic opioid have made it harder for these criminal groups to find the chemical compounds they need to produce the drug. The original source, China, has restricted exports of the necessary raw ingredients, pushing the cartels to come up with new and extremely risky ways to maintain fentanyl production and potency.

The experimentation, members of the cartels say, involves combining the drug with a wider range of additives - including animal sedatives and other dangerous anesthetics. To test their results, the criminals who make the fen-

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Pedro López Camacho said he let cartel operatives inject him with their fentanyl formulas.

# Some Doctors' Offices De-emphasize the Scale

## By RONI CARYN RABIN

Until she was in her mid-30s, Xanthia Walker rarely went to the doctor, even when she needed care. She didn't want to step on the

When she did go in - to treat sciatic nerve pain or get antibi- somehow the conversation always turned to her weight.

"Even when I went in about migraines, the response was, 'Well, if you lost weight that would probably go away," she recalled.

That changed when Ms. Walker, 40, who lives in Phoenix, found a physician. Dr. Natasha Bhuyan rejects what she calls the 'weight-centric" model of medi-

Instead, she favors a "weightinclusive" approach recognizing that people come in different shapes and sizes, and that the number on the scale does not necessarily predict health status.

"When a person comes in, the first thing we do is not check their weight," said Dr. Bhuyan, who is the vice president of in-office care and national medical director at One Medical, a primary care practice owned by Amazon.

"We bring them back, sit in the exam room, and just talk with them," she said. "It's a paradigm - if we do feel we need to

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### Spiriting Ukrainians to Safety The White Angels, a police branch, take

**INTERNATIONAL 4-15** 

bers of the ousted regime.

civilians near the front lines. PAGE 15 **Tracking Down Assad Loyalists** Syria's new administration has stepped

up its campaign to find and arrest mem-

extreme risks to rescue some of the last

NATIONAL 16-22

## There's Celluloid in Them Hills

Despite their initial skepticism, many people in Butte, Mont., now say the film industry's arrival has been a boon for the old mining town.

**SPORTS 26-29** 

## **Our National Pastime: Trivia**

We are roughly halfway between the last out of the World Series and the first pitch of spring training. Tyler Kepner helps fill the cold, dark void.

SUNDAY OPINION

Taryn Simon

PAGE 2



## The Look of Now (in 2024)

True style stands out. But it takes something more to capture it in a photograph: The eye has to report.

May Your Worries Walk Away Mel Robbins, a podcaster and self-help specialist, has embraced the idea of radical acceptance.

## **METROPOLITAN**

## A Dog on a Mission

Katie is about 4 years old and around 12 pounds, and she's devoted to one activity: killing rats. She has killed hundreds in Brooklyn.

SUNDAY BUSINESS

## Risky Loans, Fast Profits

Blue Owl Capital is one of the biggest operators in the shadowy world of private credit. But at what cost? PAGE 6

## A.I. Changes a Rural Region

Data centers need power, and Washington State's ample supply is drawing electricians from all over.



## Notre-Dame's Bold Renewal

Five years after a blaze nearly felled the 900-year-old cathedral, it has reopened, stunningly. Our critic explores the extensive renovations.

