

Chemical Levels in Atmosphere Fall

-- After years of ozone depletion, scientists now say that the hole in the ozone layer may be getting smaller. --

BACKGROUND:

Dramatic loss of ozone in the lower stratosphere over Antarctica was first noticed in the 1970s by a research group from the British Antarctic Survey (BAS) who were monitoring the atmosphere above Antarctica from a research station much like the picture below.



The Halley Research Station

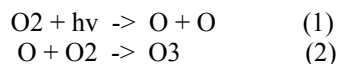
Folklore has it that when the first measurements were taken in 1985, the drop in ozone levels in the stratosphere was so dramatic that at first the scientists thought their instruments were faulty. Replacement instruments were built and flown out, and it wasn't until they confirmed the earlier measurements, several months later, that the ozone depletion observed was accepted as genuine.

Another story goes that the TOMS satellite data didn't show the dramatic loss of ozone because the software processing the raw ozone data from the satellite was programmed to treat very low values of ozone as bad readings! Later analysis of the raw data when the results from the British Antarctic Survey team were published, confirmed their results and showed that the loss was rapid and large-scale; over most of the Antarctica continent.

The earth's atmosphere is composed of several layers. We live in the "Troposphere"

where most of the weather occurs; such as rain, snow and clouds. Above the troposphere is the "Stratosphere"; an important region in which effects such as the Ozone Hole and Global Warming originate. Supersonic jet airliners such as Concorde fly in the lower stratosphere whereas subsonic commercial airliners are usually in the troposphere. The narrow region between these two parts of the atmosphere is called the "Tropopause".

Ozone (O₃ : 3 oxygen atoms) occurs naturally in the atmosphere. and forms a layer in the stratosphere, thinnest in the tropics (around the equator) and denser towards the poles. The amount of ozone above a point on the earth's surface is measured in Dobson units (DU) – typically ~260 DU near the tropics and higher elsewhere, though there are large seasonal fluctuations. It is created when ultraviolet radiation (sunlight) strikes the stratosphere, dissociating (or "splitting") oxygen molecules (O₂) to atomic oxygen (O). The atomic oxygen quickly combines with further oxygen molecules to form ozone:

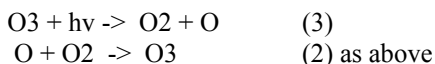


It's ironic that at ground level, ozone is a health hazard - it is a major constituent of photochemical smog. However, in the stratosphere we could not survive without it. Up in the stratosphere it absorbs some of the potentially harmful ultra-violet (UV) radiation from the sun (at wavelengths between 240 and 320 nm) which can cause skin cancer and damage vegetation, among other things.

Although the UV radiation splits the ozone molecule, ozone can reform through the following reactions resulting in no net loss of ozone:

IN THIS ISSUE:

- | | |
|---|--|
| 3 | Bigfoot Convention |
| 5 | Butch Cassidy/First Robbery |
| 6 | Ryder Cup/The Countdown to the Emmy's |
| 7 | Presenting America to the Arab World: Sawa |
| 8 | Of The Week/ Order Information |



The Ozone Hole often gets confused in the popular press and by the general public with the problem of global warming. Whilst there is a connection because ozone contributes to the greenhouse effect, the Ozone Hole is a separate issue. However it is another stark reminder of the effect of man's activities on the environment.

Over Antarctica (and recently over the Arctic), stratospheric ozone has been depleted over the last 15 years at certain times of the year. This is mainly due to the release of manmade chemicals containing chlorine such as CFC's (ChloroFluoroCarbons), but also compounds containing bromine, other related halogen compounds and also nitrogen oxides (NO_x). CFC's are a common industrial product, used in refrigeration systems, air conditioners, aerosols, solvents and in the production of some types of packaging. Nitrogen oxides are a by-product of combustion processes, eg aircraft emissions.

The ozone depletion process begins when CFCs and other ozone-depleting substances (ODS) are emitted into the atmosphere. Winds efficiently mix the troposphere and evenly distribute the gases. CFCs are extremely stable, and they do not dissolve in rain. After a period of several years, ODS molecules reach the stratosphere.

Strong UV light breaks apart the ODS molecule. CFCs release chlorine atoms, and halons release bromine atoms. It is these atoms that actually destroy ozone, not the intact ODS molecule. It is estimated that one chlorine atom can destroy over 100,000 ozone molecules before finally being removed from the stratosphere.

Since ozone filters out harmful UVB radiation, less ozone means higher UVB levels at the surface. The more depletion, the larger the increase in incoming UVB. UVB has been linked to skin cancer, cataracts, damage to materials like plastics, and harm to certain crops and marine organisms. Although some UVB reaches the

surface even without ozone depletion, its harmful effects will increase as a result of this problem.

STORY:

Chlorine-based chemical levels in the atmosphere are falling, and the hole in the ozone layer over Antarctica should close within 50 years, according to an Australian government-funded study.

Although the ozone layer had not yet begun to repair itself, the hole would probably start closing within five years, and should fully recover by 2050, said Paul Fraser, of the Australian government-funded Commonwealth Scientific and Industrial Research Organization, or CSIRO. Fraser said ozone layer recovery is a result of international efforts to ban ozone-depleting chlorofluorocarbons in the mid-1990s.

CSIRO atmospheric monitoring has found that chlorine from chlorofluorocarbons, or CFCs, leveled off in the troposphere "the lower atmosphere" two years ago, and is falling for the first time in more than 20 years. The ozone layer over the southern continent of Antarctica has suffered the most damage from CFCs, which have eaten a hole about 10 million square miles. The hole is about three times the size of Australia.

The CSIRO and Australia's Bureau of Meteorology have been monitoring and recording the level of chlorine in the troposphere over Australia's southern island state of Tasmania for several years. Scientists expect the chlorine decrease will lead to a gradual recovery of the ozone layer during the next half century. In turn, the ozone recovery will decrease the risk of skin cancer and similar ailments in the far southern hemisphere, where damage to the protective layer of gas is most serious.

The ozone recovery will not alleviate projected global warming problems, however, which is related to the release of other heat-trapping gases into the atmosphere.

SIGNIFICANCE:

The first global agreement to restrict CFCs came with the signing of the Montreal Protocol in 1987

ultimately aiming to reduce them by half by the year 2000. Two revisions of this agreement have been made in the light of advances in scientific understanding, the latest being in 1992. Agreement has been reached on the control of industrial production of many halocarbons until the year 2030. The main CFCs will not be produced by any of the signatories after the end of 1995, except for a limited amount for essential uses, such as for medical sprays.

The countries of the European Community and the United States have adopted even stricter measures than are required under the Montreal Protocol agreements. Recognizing their responsibility to the global environment they have agreed to halt production of the main CFCs from the beginning of 1995. Tighter deadlines for use of the other ozone-depleting compounds are also being adopted.

"Once CFCs have been phased out of the developing world ... by about 2005, the most persistent ozone-depleting chemicals in the atmosphere will no longer be released in any significant amounts," Fraser said in a telephone interview on Tuesday. "That means that the atmosphere can work its magic and start to destroy these chemicals at a rate faster than they're being released," he added. Fraser said the discovery proved that direct action taken by the international community on environmental issues could make a difference.

Bigfoot Believers Attend Convention

--Believers in the legendary monster get together to share stories and evidence.--

BACKGROUND:

Bigfoot, Abominable Snowman, and Yeti are just a few of the names attributed to the legendary beast that hides in the wilderness, rarely seen or heard, but inspiring stories the world over.

The term sasquatch, the widely accepted name for these animals, comes from the Coast Salish Indian (of Fraser Valley, Vancouver Island) word "S*squac," meaning "wild man." There are a total of more than 60 words for sasquatch.

A figure unknown except through tracks ascribed to it and through alleged encounters, Bigfoot is described as being 6 to 8 ft tall and covered with long, dark hair. Attempts after the 1950s to verify the authenticity of its tracks (notably by Sir Edmund Hillary in 1960) have



yielded no conclusive results. Tracks have been described and photographed with 3 or 5 toes and from 11 to 15 inches. Few tracks are alike and all tracks are considered questionable due to the possibility of a hoax.

Most scholars dismiss the existence of the creature. A somewhat similarly

described creature of W North America is known as Bigfoot or Sasquatch. See R. M. Pyle, *Where Bigfoot Walks* (1995); R. Messner, *My Quest for the Yeti* (tr. 2000).

Cryptozoology is the study of still unknown species of animals. These cryptids, as they are called, include not only the Loch Ness monster, sasquatch and other "mega-monsters", but also many lesser known mystery creatures. (Some of these have more evidence going for them than the monster super-stars.) Cryptozoology often receives a bad rep because it is often practiced with little skepticism, or regard for scientifically supported facts and theories. Likewise, paranormal cryptozoologists do little to help the integrity of cryptozoology. It can, however, be a level-headed, interesting and possibly even scientific subject, if examined with open-minded skepticism and a scientific viewpoint.

STORY:

Believers in Bigfoot ignored a history of hoaxes and misidentifications and gathered Saturday to exchange stories and peruse books and items on the creature. About 120 people attended the fourth annual East Coast Bigfoot Conference and Expo in this town outside Pittsburgh. Sale items included plaster casts of footprints some with five toes, some with three.



"There's just too much evidence collected, too many sightings, too many reports for the creature not to exist," said Eric Altman, director of the Pennsylvania Bigfoot Society. Altman does not claim to have actually seen a Bigfoot. However, while investigating a report in the woods of Bradford County two years ago, he and another researcher heard some sort of creature.

"We couldn't see it, but we could hear it mumbling and growling almost like speaking," said Altman, 32, who installs software for AT&T. He said it crossed the trail about 100 yards ahead of them, just out of sight.

Over the past three years, the society has investigated more than 50 Bigfoot reports in Pennsylvania. Though the Northwest is best identified with Bigfoot, or Sasquatch, Altman said Pennsylvania ranks fourth among states with more than 500 sightings dating to the 1800s.

Christine Vinkler, 50, said she would have thought anyone claiming to see a Bigfoot was crazy, too until June 2000, when she said she saw one while driving to work. "I was a skeptic, very much so," she said.

Others not at the expo said they simply haven't seen any proof. "There's a lot of evidence. The problem is it's not good evidence," said Benjamin Radford, managing editor of "Skeptical Inquirer," the magazine of the Committee for the Scientific Investigation of Claims of the Paranormal. "People have always believed in the fantastic," said Barbara Mikkelson, who runs the Urban Legends Reference Page on the Internet. "We want to believe in a world where miracles can happen."

SIGNIFICANCE:

953 frames of 16mm footage filmed by Roger Patterson and Bob Gimlin on October 20th, 1967, at approximately 1:15pm, is often cited as the best evidence of Bigfoot to date. The mere existence of what we call The Patterson Film, provides evidence that the "Bigfoot phenomenon" is not always due to a mass hallucination, or sociological phenomenon, since you can't take pictures of a mass hallucination or a sociological phenomenon.

The film is also evidence that in its case, the Bigfoot phenomenon is not due to a catalogued animal that has been misidentified, since we do not recognize exactly what kind of creature is in the film. It looks like a human being in a gorilla suit, so it could still be caused by a hoax. The film could still be caused by deliberate human fabrication, but we can tentatively rule out unwitting human fabrication in the form of "mass hallucination" and we can tentatively rule out a misidentified catalogued animal; as the possible causes behind the Patterson Film.

Whether or not the Patterson film is a real film of a real creature, the mere existence of the Patterson film symbolizes that the Bigfoot phenomenon is most likely to be caused by one of two possible explanations: 1) It's caused by a hoax or hoaxers, or, 2) it's caused by sightings of an uncatalogued animal. However, different sightings and footprint finds may have different causes behind them.

WHO YOU NEED TO KNOW:**Butch Cassidy****(1866-1908)**

The child who would become Butch Cassidy was born as Robert Leroy Parker on April 13, 1866 in Beaver, Utah. His was a Mormon family and Robert was the first of thirteen children. At age 13, Roy was put to work as a seasonal laborer on the Ryan ranch at Hay Springs. His first run in with the law came when he rode into town to buy a pair of jeans. Finding the store closed, he let himself in, took the jeans and left a note pledging to return to pay. The storekeeper wasn't impressed and called the law. Young Roy was humiliated over the affair. Thus he got a bitter taste for the legal process.

Before long Roy was working on another farm, this time belonging to a Jim Marshall. He came into contact with a drifter named Mike Cassidy who came to work on the ranch. Cassidy was engaged in stealing cattle and horses and it wasn't long before young Roy had thrown in with Cassidy. Cassidy had a profound effect on the lad who became Parker's criminal mentor and taught him how to shoot.

Soon Roy's rustling activities had come to the attention of the authorities and he had to flee the county. In 1884 he joined a gang whose members included a former member of the notorious James gang, one Bill McCarty. He participated in train hold ups and bank robberies for some time before drifting out on his own. It was around this time that he took on the name Butch Cassidy. He was nabbed by a sheriff in Wyoming in 1894 and spent two years in jail for cattle rustling. Cassidy had actually come up with a more efficient way of rustling by simply extorting money from ranchers so that their steers weren't stolen.

After jail, at age 30 he decided to form his own gang including Ben Kilpatrick and Harry Longbough who would become known as the Sundance Kid. After robbing a bank and stealing a

mining camp payroll the press christened the gang "The Wild Bunch."

The Wild Bunch distinguished themselves, not by their violent actions, but rather by their daring and flair. Cassidy made a point of avoiding needless violence. He proudly proclaimed, "I have never killed a man," and would shoot at his pursuers horses rather than the men themselves.

A series of similar train robberies followed. The Railroad organized it's own gang of gunfighters to bring in the Wild Bunch. With this heat making life uncomfortable, Cassidy decided to transfer his operations to South America. Ditching the rest of the gang, Butch and the Sundance Kid traveled to New York, along with The Kid's fiance Etta Place.

THIS WEEK IN HISTORY:**September 19, 1900****First Robbery Together**

Robert Parker and Harry Longbaugh, better known as Butch Cassidy and the Sundance Kid, rob the First National Bank in Winnemucca, Nevada on their way to New York, marking the first time that the duo worked as a team, and beginning a storied career as famous outlaws.

After the Robbery, seeking respite from the Pinkerton detectives who were hot on their trail, Sundance, Cassidy, and Etta Place, a schoolteacher with whom Sundance had become involved while hiding out in Texas, made their way to South America. Place scouted out banks in Argentina for Cassidy and Sundance, who then robbed the poorly guarded depositories. When they became too well known in Argentina, Cassidy and Sundance moved to Bolivia, where they worked honest jobs for a few years before their identities were discovered.

According to most reports, the pair was ambushed by Bolivian soldiers and killed in San Vicente.

SPORTS:

RYDER CUP

Known for its tricky rules, famous golfers and anything-can-happen atmosphere, the Ryder Cup is one of the most highly anticipated golf matches of the year; it is a time when even golf critics find themselves watching and maybe even holding their breath.

Thirty-three matches have been played by the USA and Europe teams over the seventy-two years since the first official match in 1927 at Worcester, Massachusetts. The matches are played every second year, with the exception of the 34th Ryder Cup Matches and alternate between Europe and the United States.

The matches can be divided into three categories: foursomes (two man teams in alternate shot on the same ball), fourball (two-man teams everyone playing their own ball, lowest number of shots wins hole for team), and singles (18 holes at match play). Match play is a game that is decided hole by hole instead of cumulatively over 18 holes. The order of play during the first two days of competition (foursome or fourballs) is determined through mutual agreement of both teams' captains. There are a total of 28 matches.

The team with the fewest strokes wins the hole, the team that wins the most holes wins the match and earns a point (a tie receives a half point) for the entire team. Whichever team wins the most points by the end of play wins the tournament and keeps The Cup until the next year.

Competition lasts Friday through Sunday at The Belfry, in Sutton Coldfield, England.



The American team includes: Tiger Woods, Phil Mackelson, David Duval, Mark Calcavecchia, David Thoms, David Love III, Scott Hoch, Jim Furyk, Hal Sutton, Stewart Cink, Scholl Verplank, and Paul Azinger; **Team Captain:** Curtis Strange.

More Information: www.rydercup.com

ENTERTAINMENT:

And the Winners Are...

Prime time's best took out their black ties and runway gowns last night for the 54th annual Emmy Awards. The festivities begin with E!'s coverage of the Primetime Emmy Awards from the Los Angeles Shrine Auditorium at noon (ET/PT) with "Live from the Red Carpet," featuring Joan and Melissa Rivers on the lookout for celeb arrivals.



Joan Rivers and daughter Melissa are well known for their pre-Emmy interviews and fashion critiques.

The big show itself aired on NBC, with host Conan O'Brien. Scheduled presenters included: Martin Sheen (also a nominee); Bernie Mac (ditto); Debra Messing (ditto), last year's host Ellen DeGeneres, the cast of Friends, and the Osbournes (Ozzy, Sharon, Kelly and Jack--Emmy winners all, as of last weekend, for their hit MTV reality series).

And the winners are:

Drama Series: "The West Wing" NBC.

Comedy Series: "Friends," NBC.

Variety, Music or Comedy Series: "David Letterman" CBS.

Miniseries: "Band of Brothers," HBO.

Made-for-TV Movie: "The Gathering Storm," HBO.

Actor, Drama Series: Michael Chiklis, "The Shield," FX.

Actor, Comedy Series: Ray Romano, "Everybody Loves Raymond," CBS.

Actor, Miniseries or a Movie: Albert Finney, "The Gathering Storm," HBO.

Actress, Drama: Allison Janney, "The West Wing," NBC.

Actress, Comedy Series: Jennifer Aniston, "Friends," NBC.

Actress, Miniseries/Movie: Laura Linney, "Wild Iris," SHO.

Supporting Actor, Drama Series: John Spencer, "The West Wing," NBC.

Supporting Actor, Comedy Series: Brad Garrett, "Everybody

Loves Raymond," CBS.

Supporting Actress, Drama Series: Stockard Channing, "The

West Wing," NBC.

Supporting Actress, Comedy Series: Doris Roberts,
 "Everybody Loves Raymond," CBS.
 Bob Hope Humanitarian Award: Oprah Winfrey.

FEATURE:

Presenting America to the Arab World: Sawa

By Barbara Wilson

Americans have been shocked by the virulence of the anti-American demonstrations in the Arab world. Why do they hate us? What can we do to improve our image? One of the most innovative and successful efforts is being made by Sawa, a new US sponsored Arabic language radio service that uses proven Western broadcasting techniques to attract the largest possible audience for the station's mission. Sawa seeks not to present the US government point of view or any US propaganda, but to be an example of free press. There is no attempt to glamorize or whitewash America, but to present it as it is with all of its strengths and faults.

The driving force behind Sawa is Norman Pattiz, founder and chairman of Westwood One, America's largest radio network. "There is a media war going on in the Middle East," Mr. Pattiz declared, "and we have not even been in the battlefield." The war is for the hearts and minds of the Arab youth; the vilest of propaganda and incitement to hatred are its weapons. Mr. Pattiz, through Sawa, has sought to put America on the battlefield with music, honest reporting, and two-way communication as weapons.

Sawa's staff does in-depth regional surveys to determine the musical preferences of the listeners. The programming presents the most popular contemporary Arabic and western music throughout the day. News and features are presented at fifteen and forty-five minutes after the hour. Young people tune in for the music and stick around for the news. Sawa means "together" in Arabic, and the station slogan is "You listen to us and we will listen to you." One radio segment

is "I want to Know" in which questions by listeners are answered. The station receives thousands of e-mails daily. Every one of them is answered personally on the air. The responses to these questions is a powerful avenue to lead these young Arabs toward a truer picture of America. Other radio features include segments on dating, marriage, finance, health, and the internet: very much the same topics that interest young people everywhere.

Radio Sawa is currently being broadcast on AM, FM, short wave, and digital satellite in sixty-five languages and dialects into Egypt, Lebanon, Syria, Qatar, Saudi Arabia, Oman and Iraq, with plans to broadcast into Iran. The percentage of listeners since Sawa's beginning broadcast in March of 2002 is steadily increasing. The remarkable success it has enjoyed has encouraged Mr. Pattiz to present a model for a Mideast TV Network: MTN, to Congress in September of this year.

Mr. Norman J. Pattiz founded Westwood One as a small radio syndication in 1976 in a one room office on the west side of Los Angeles. Today, the company is the world's largest radio syndication service and owns the Mutual Broadcasting System, the Unistar networks, NBC radio and distributes hundreds of radio programs. They broadcast entertainment, news, finance, sports, talk, and traffic programming (including Don Imus and Martha Stewart) to about 7,500 radio stations.

Mr. Pattiz serves as President of the Broadcast Education Association and founded the Counsel of Professionals to draw other industry leaders into higher education. He is a Trustee of the Museum of Television and Radio, and serves on many boards, like the Communications Board of the Associated Students of UCLA, and the Radio Network Association, across the US that promote education and advancements in broadcasting technology and quality.

Barbara Wilson is a retired high school English teacher. She has her Master's Degree in English Literature. She is a world traveler and patron of the arts in San Francisco.

Quote of the Week:

A thing you don't want is dear at any price.

-Proverb

Fact of the Week:

The Great Salt Lake is only 13 feet deep.

Word of the Week:

sawa (sa * wa) *adv.* (Arabic) together.

To order by **credit card**, please visit us at

www.theweeklyreport.com/orders.html

To order by **check**, please send

- Name and e-mail address
- Check for \$15.00 (*CA Residents: \$16.09*)
For a 3 month subscription

To: New Accounts; The Weekly Report;
19 Elda Drive; San Rafael, CA 94903

Thank You For Reading

And

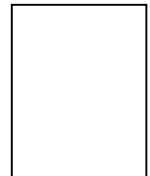
Have a Great Week!

Please visit our web site at:

theweeklyreport.com

We will tell you
What You Need To Know!

The Weekly Report
19 Elda Drive
San Rafael, CA
94903



TO:

Empty rectangular box for recipient address