

Collectormania!

PERISH THE THOUGHT — HAS CD ROT TARNISHED YOUR DISC?

by Lisa Wheeler

Scott Sena knew something was terribly wrong with his Neil Young *Decade* CD when he first opened up the jewel case. "It looked like a mouse had been nibbling at it," the Hyannis Port, Mass., collector said. Sena had always taken great care of his music and didn't understand why a recording he bought brand-new just three years earlier was showing signs of encroaching deterioration.

"I was horrified. There was this hairline crack along the bottom of my disc that wasn't there before," said Kym Miller, a Honolulu based collector, who had opened the jewel case on his *The Essential Jimi Hendrix* CD only to find the mysterious marking. With an estimated 4,600 well-cared-for compact discs in his collection, it was the last thing he expected to see.

Both are examples of the disintegration of the digital recording media, often referred to as "CD rot."

First marketed in the early 1980s as an almost indestructible media, compact discs appeared to be too good to be true. However, while digital durability was wooing converts en masse, the rush to keep up with demand may have compromised some recordings, not evident until, in some cases, decades after purchase.

"The CD was definitely oversold when it first appeared. The promoters were so busy extolling its undoubted virtues, they overlooked its vulnerabilities," said Graeme Jaye, a CD restorer based in Spain.

"Unfortunately, there is a general public feeling that anything digital is good, and it has taken some time for the message to get through that CDs are, in fact, quite easy to damage and that they don't 'play through' the damage but often just stop completely."

"It's like an automobile tire," said Dr. Jerry Hartke, founder and president of Media Sciences, an internationally recognized testing laboratory for the data storage industry. "Tires can withstand all forms of abuse, including potholes. However, tires produced with defective cords or belts can fail."

To best describe rot or bronzing, as it is sometimes called, discs may appear as if they are bubbling or peeling, while some show what look to be cracks or tiny pinholes and are easily viewed when placed near a light. Others describe it as an almost mold-like appearance. The destruction starts at the outer edge of the disc and literally creeps to the inside, a fact not lost on Sena upon discovery of his Neil Young disc rot. "The damage conveniently stopped before hitting the end of the song 'Helpless,' he said. His initial discovery of his decaying *Decade* CD led him to find others in his collection, including Hootie And The Blowfish's *Cracked Rear View Mirror*. "It has what appears to be a large rogue hair on it, but if you look through it, the aluminum appears separated in the lacquer."

"I've actually only seen two cases of what would be described as rot," said Jaye. "A client sent me a CD to

be repaired, but when we looked very closely at the disc it was apparent that the reflective layer had broken down. It looked like miniature 'crazy paving,' with very fine breaks across the whole of the surface. The second example turned up a couple of years later, at an exhibition we were taking part in. This disc looked exactly the same as the first one. More interestingly, they had come from the same manufacturing plant — in India, if I remember correctly."

While Hartke agrees that rot (a term he disapproves of) can be partially attributed to poor manufacturing, he doesn't place sole blame on the recording process. "We field-tested 100 discs, and poor user handling was the number one reason for failure."

Think of the composition of a compact disc much like a thinly layered sandwich cookie. The bottom cookie is made up of a strong polycarbonate layer, the middle "frosting" layer is made of aluminum, while

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the top-layer cookie is composed of lacquer. "I think the general public understands nothing about how a CD is made or works," said Jaye. "I have demonstrated CD repair equipment, which basically grinds out the scratches and re-polishes the 'play' side of the disc, many times and I am still amazed by the number of people who ask me, 'Won't that take out the music?' However, it really doesn't surprise me that that's how most people think. Most of my clients insist on placing their CD's label side down when they take them out of the player, because they think that's the safer way."

Hartke isn't surprised by the admission. He said most users don't understand the actual fragility of the media. For instance, a surprising number of users he has surveyed think that the underside, or polycarbonate side of the disc, is the most susceptible to irreversible damage. In reality, the "label," or top side, lacquered aluminum part of the recording, is the most vulnerable.

"When I first started buying them I thought my compact discs would last forever, no matter what I put them through," said Letrice Cook, a Detroit-based CD enthusiast, with more than 800 compact discs in her collection. "If you ask me if I have ever left my CDs on the front seat of my car on a hot day, I'd have to admit I have. If you go on and ask me if I have ever forgotten to place a CD back in its case and [if] the cat has walked all over it, I am guilty as



The condition known as "CD rot" is visible on the chipped edge of this compact disc.

Rot can be partially attributed to poor manufacturing procedures, but rough user handling is the most common cause.

charged. You'd think after I bought my third copy of Mariah Carey's *The Emancipation Of Mimi* that I would know better."

CD care and handling

Hartke offers these tips to caring for your music investment:

- Handle discs only by the edges.
- Do not write on or abuse either "top" or "bottom" surface or apply adhesive labels. The top of the CD is especially susceptible to damage. Only a microscopically thin layer protects the metal layer and sensitive data pits that lie just beneath the label surface. Using a ballpoint pen or other hard writing implement to write directly on the label side can ruin the disc. Use only pens with water-based inks, and write only on the clear inner ring if possible. Adhesives from labels may chemically attack the protective layer of the disc.
- Store discs in sturdy jewel cases, not in disc "envelopes," especially those with windows.
- Keep discs stored like wine — in a cool, dry place.
- Always keep compact discs out of high humidity and direct sun.
- Never stack un-cased discs on top of each other.
- If a disc is irreversibly damaged, replace it; don't attempt to "save it." Some suggest polishing with toothpaste and even car polish to "buff" out scratches; however, polishing just replaces one scratch with several smaller scratches. Try cleaning using a soft, lint free cloth and mild soapy water. Do not use detergents or solvents such as alcohol. Distilled water is best, since tap water may contain impurities that could remain on the disc. Make sure the cloth you use does not contain any particles or hard fibers that could scratch the disc. Gently wipe with the wet cloth in a radial direction, being careful to avoid any pressure on the label surface. Then dry the disc. Do not allow water to remain on the surface.

What concerns do you have regarding the upkeep of your collection? Please tell me about them. If you have a story suggestion or a comment, contact me, via my Web site, www.isleofwrite.com. There you will also find past articles for your dining and dancing pleasure.