What you should know

- The CSU Regional Archives are open Monday to Friday, 9am to 5pm. Located in the Blakemore Building at the South Campus of the university, access can be gained via College Avenue or Hely Avenue.
- Members of the public are welcome to visit the search room, where professional archival staff can assist with enquiries. For those people unable to visit the archives in person, staff can provide a research service for straightforward enquiries for a fee of $55 per hour, including copying and postage.
- For further information, phone 6925 3666, email *archive@csu.edu.au* or visit the website at *www.csu.edu.au/research/archives* for a full listing of holdings and more detailed information.

Preserving your precious photos

at the **archives**

Wayne Doubleday

In the space of a little over 150 years since its invention, photography has gone from something quite rare and mysterious to something completely ordinary and commonplace. Because of this, we don't always give photographs the care they need.

The majority of photographs, because of how they are created, are inherently unstable and will certainly deteriorate over a relatively short amount of time. While digitisation is currently having a huge impact on how photographs are stored, many people are still looking for ways to preserve the original physical copies.

Deterioration

IT IS not possible to accurately predict how long a photograph will last. However, because most prints and negatives begin to show some signs of deterioration early on in their life, we have learned that the following are the main reasons for deterioration:

- High temperature and humidity
- Pollutants in the atmosphere and from storage materials
- Residual processing chemicals
- Exposure to light
- Fungi and insect attack
- Physical damage from careless or misguided handling

Basically, there are three parts to a photograph – the actual image (usually made of silver); the carrier (usually gelatine) which "carries" or holds the silver, and the support (made of paper, plastic film, glass or metal). Each of these parts can contribute to the destruction of photographic images.

There are a number of airborne pollutants to which silver is particularly sensitive, such as hydrogen sulphide, ammonia, sulphur dioxide, ozone, and even the chemicals used to "fix" the image can form silver sulphide.

All of these can result in the oxidation of the silver, causing discolouration and fading of the image.

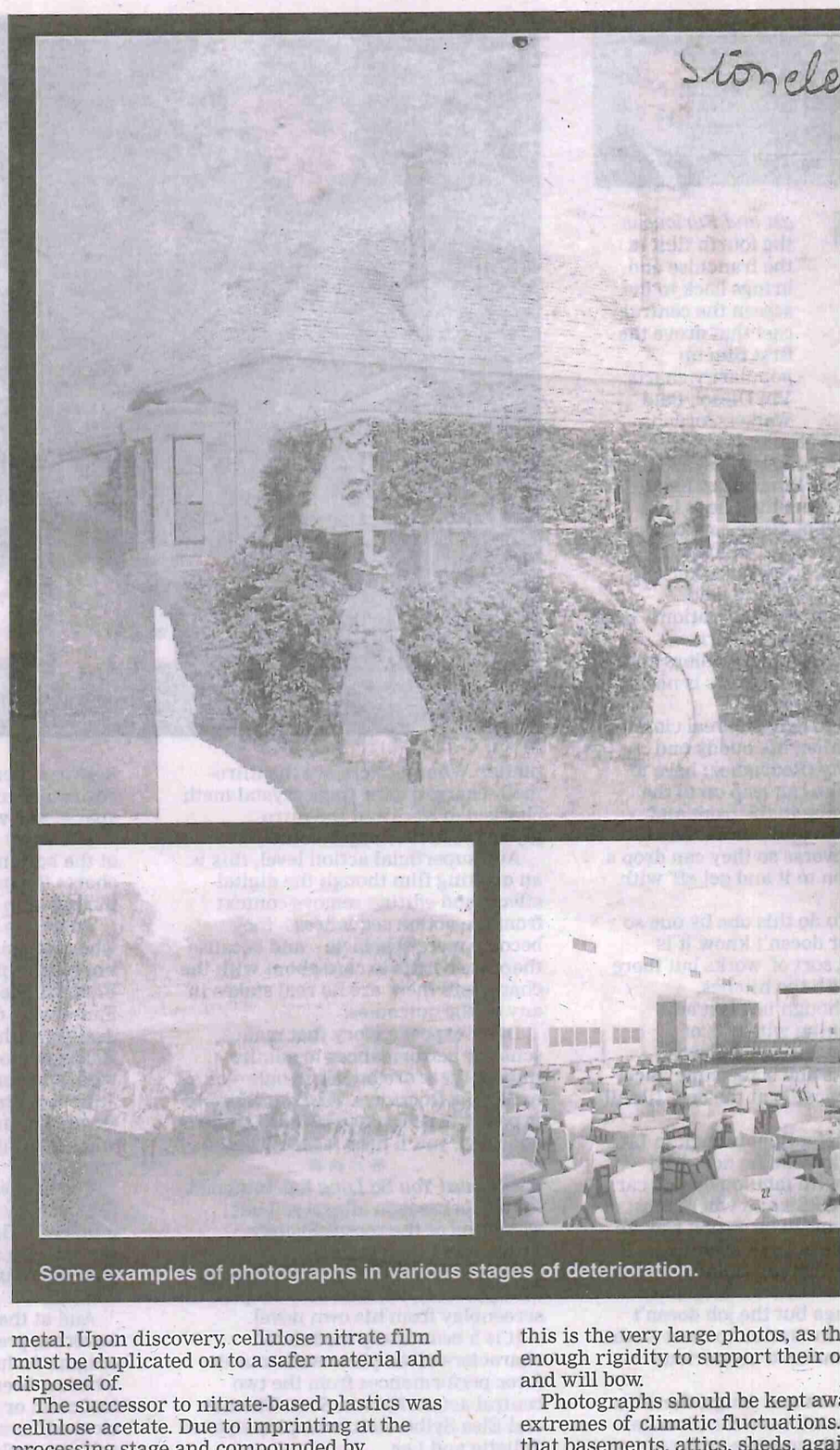
Harmful pollutants can be found in the materials often used to store photographs – materials such as rubber bands, acidic plastics, and the adhesives used to stick photos to albums. Also, chemicals such as insecticides, fungicides and household cleaning products can add to the problem.

Gelatine, the carrier, is a porous substance that allows the necessary chemicals to get at the silver and develop the image.

Its sponge-like nature will also permit other pollutants access to the silver, causing oxidation. One common sign of this is the dark areas of an image becoming silver. Gelatine is also susceptible to attack by mould, insects and high humidity.

Supports for photographic images take many forms, the best known being paper. Because of the necessarily high quality needed to withstand the chemicals, paper supports have no inherent instability to cause deterioration.

Glass, though obviously fragile, is an inert, transparent material and as such is an ideal



Some examples of photographs in various stages of deterioration.

metal. Upon discovery, cellulose nitrate film must be duplicated on to a safer material and disposed of.

The successor to nitrate-based plastics was cellulose acetate. Due to imprinting at the processing stage and compounded by uncontrolled humidity through the rest of its life, cellulose acetate can suffer what is commonly known as "vinegar syndrome". This can be easily detected by the smell of acetic acid, strongly reminiscent of vinegar.

Polyester film is replacing acetate-based film. So far, all indications are that polyester has very good keeping qualities, though prolonged low humidity can promote high levels of static, attracting dust particles to the surface of the film.

this is the very large photos, as th
enough rigidity to support their o
and will bow.

Photographs should be kept awa
extremes of climatic fluctuations.
that basements, attics, sheds, agai
walls and near water pipes, are no

Wooden shelves are also not suc
as they release harmful vapours a
insects. Prolonged exposure to ult
will cause fading, so photographs
packed away, out of direct light.

Ideally, photographs should be
wrapped. Being separated, the de
one photograph shouldn't affect a
its vicinity.

Anything which comes into dir
with photographs should be made