

*The Story of the Spirit
of Ecstasy*





The 20-Ghost Club Australian Chapter (Inc.)
The oldest Rolls-Royce Club in the World

Barrie Gillings has spent more than 50 years researching and documenting the history, types and manufacturing techniques of the Rolls-Royce Spirit of Ecstasy mascot.

In recognition of a lifetime of this historical work, the 20-Ghost Club of Australia has initiated the production of this educational booklet, with the generous help of his wife Margaret, for the use of current and future enthusiasts of the marque.

INTRODUCTION

This booklet records the text and illustrations of the lecture given on Thursday, April 7, 2011 at Rydges Hotel in Canberra during “The Centenary of the Spirit of Ecstasy Rally” of the Rolls-Royce Owners’ Club of Australia.

The Rally Director, Ian Irwin, asked me to display and discuss the Spirit of Ecstasy mascots I have collected since the formation of our club on June 6, 1956. Back then, I owned a Rolls-Royce 20 H.P. GDK35 but it did not have a mascot. George Green, a fellow foundation member of the RROCA, allowed me to copy his kneeling Silver Dawn mascot. I used dental duplication jelly to make a wax pattern which was then cast in brass. I later learned that this was the technique used by the creator of the original ‘Spirit of Ecstasy’, Charles Sykes. He made the mascots and sold them to Rolls-Royce Limited from 1911 to 1928. His daughter Josephine (Jo) Phillips (*nee* Sykes) took his place from 1928 to 1939. The mascots were, over this period, always an optional extra and recorded as such on the sales cards.

In 1957 we sold our 20H.P. and left for overseas. After six months in the U.K, we moved to Rochester, N.Y. where I was to undertake post-graduate study. Before our departure from Australia, our club appointed me a vice-president so I could liaise with the U.K.’s 20-Ghost Club and the Rolls-Royce Owners’ Club of America. This official status was very helpful, as we were made Honorary Members of the 20-Ghost Club and, later, we were made most welcome in the U.S.A. by John McFarlane, inaugural editor of the RROC Inc. journal ‘The Flying Lady’. He and his Advertising Editor, John Utz, both lived in Rochester. The U.K. and the U.S. experiences provided me with many opportunities to learn more about the mascot.

In 1960 John McFarlane asked me to write an article on the mascot for ‘The Flying Lady’. He arranged for R-R Ltd to supply photographs from the mascot collection of Stanley Sears’, the 20-Ghost Club President. He also obtained the hand-written lecture notes used by Jo Phillips for her lecture about the mascot to the UK’s Rolls-Royce Enthusiasts’ Club in December, 1959. My article appeared in TFL pp. 502-506, July 1961. I up-dated and extended this article in Praeclarum 2-07 to 5-07 and in ‘The Flying Lady’ 07-2 to 07-3. It can be found at rroc.org.au in the ‘General Library’ section.

I have been able to continue my mascot studies through the kindness of many colleagues, who have, over the years, allowed me to copy their interesting or unusual mascots on the basis of one for them and one for my collection. In the meantime, these owners can use the copy mascot on their cars and leave the original safe at home. **Barrie Gillings**



This is Eleanor Thornton with 1910 Silver Ghost 1404. It was then owned by John, the second Lord Montagu of Beaulieu and, although pre-dating the Spirit of Ecstasy mascot, was the first car to wear one. SG 1404 is now owned by Ian Irwin, who has completed a long-term restoration.

These are the important players in the creation of the Spirit of Ecstasy mascot, also called 'The Flying Lady', "Emily", 'Nellie' and other names and which was introduced on 6th Feb 1911.



John Scott Montagu was a prominent early motorist and motoring publisher, closely associated with Rolls-Royce Ltd. He opened their new factory in Derby in 1909.



Eleanor Thornton was assistant to Claude Johnson until he joined with Rolls and Royce as managing director. Eleanor was then taken on as private secretary to Lord Montagu.



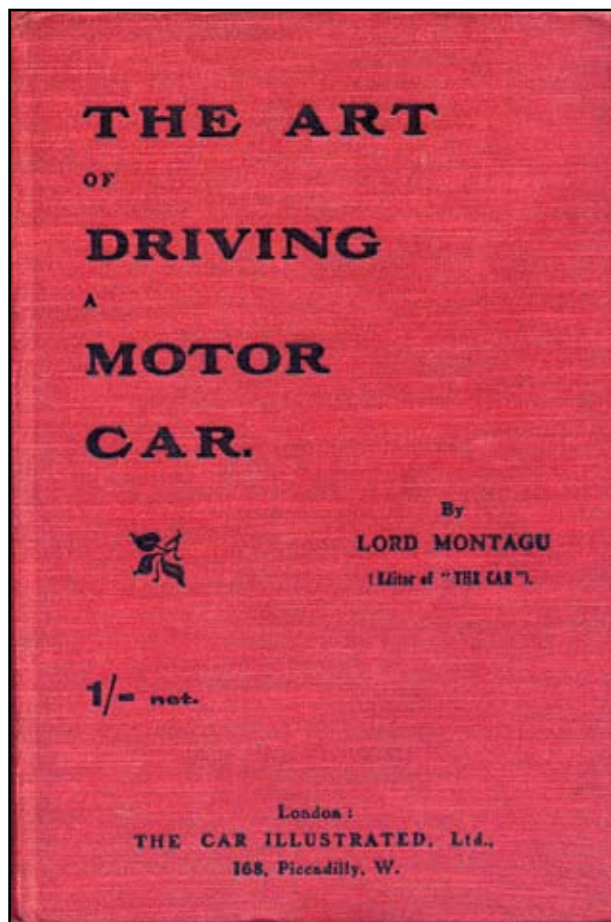
Claude Johnson was a prominent early motorist and secretary to the Automobile Club of Great Britain and Ireland (later the Royal Automobile Club) but joined Rolls in business in 1901. He brought Rolls and Royce together in 1904.



Charles Sykes was an artist and sculptor, who painted motoring scenes for John Montagu and R-R Ltd and in 1910 was selected by Johnson to sculpt a mascot suitable for Rolls-Royce motorcars. He made them for R-R from February 6th, 1911 until his daughter took over manufacture in 1928.

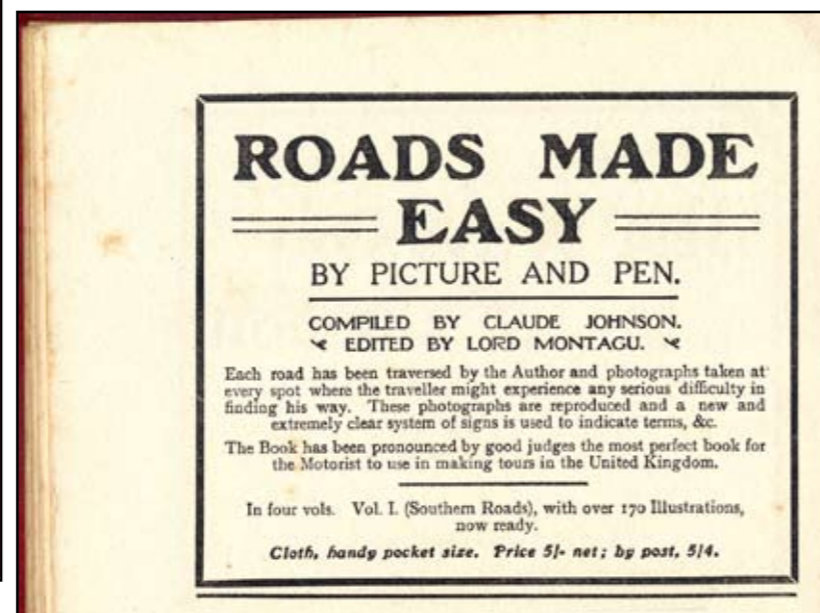


Jo (Josephine) Phillips (*nee* Sykes), an artist in her own right, supervised mascot manufacture from 1928 until end of production in 1939.

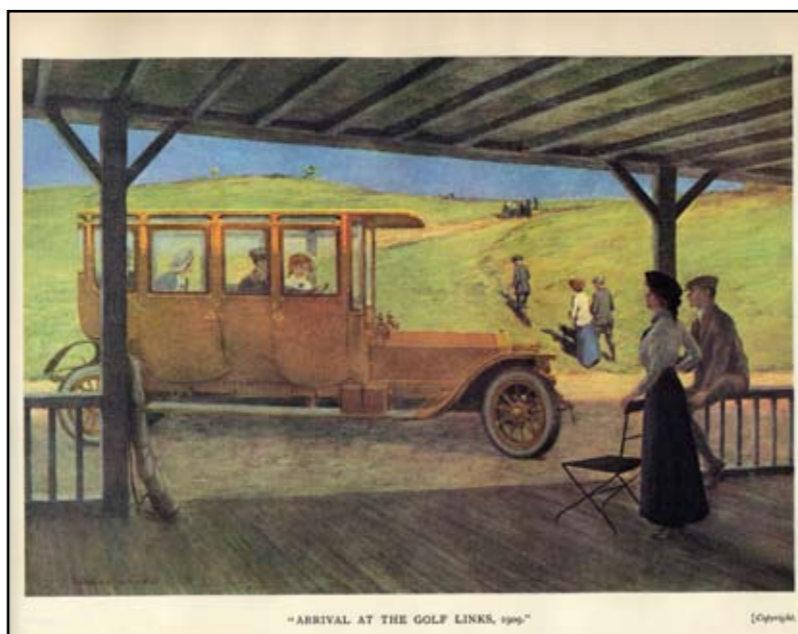
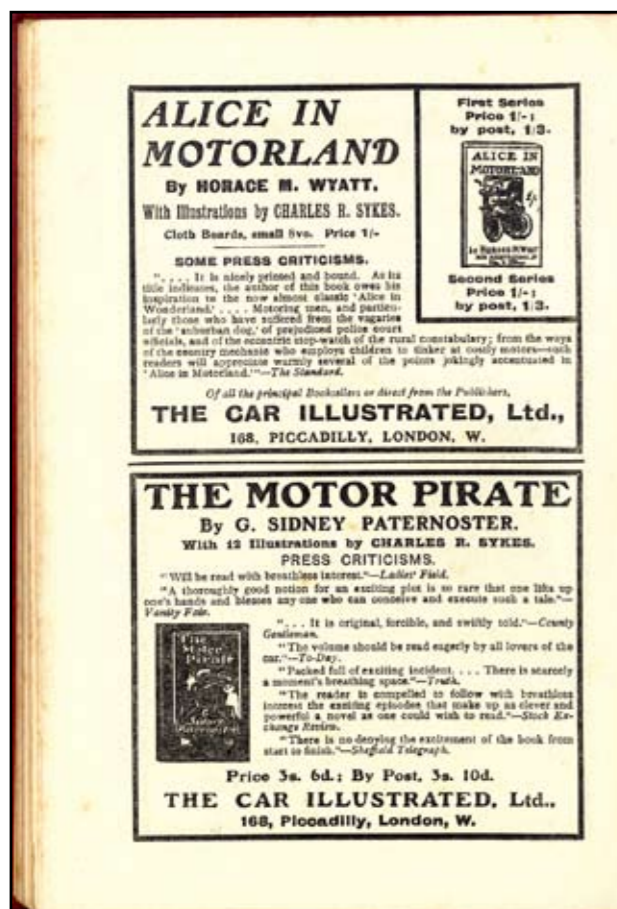


John Montagu published motoring books. His book on driving is trite today but, at the time, must have been invaluable for would-be motorists.

It carried advertisements for 'Roads Made Easy', 'Alice in Motorland' and 'The Motor Pirate', and these show the close relationships between John Montagu, Claude Johnson and Charles Sykes.



Claude Johnson's experience as a motorist is clear from this book, much of it gained by his competition driving and job as Secretary to the Automobile Club. Montagu edited the book.



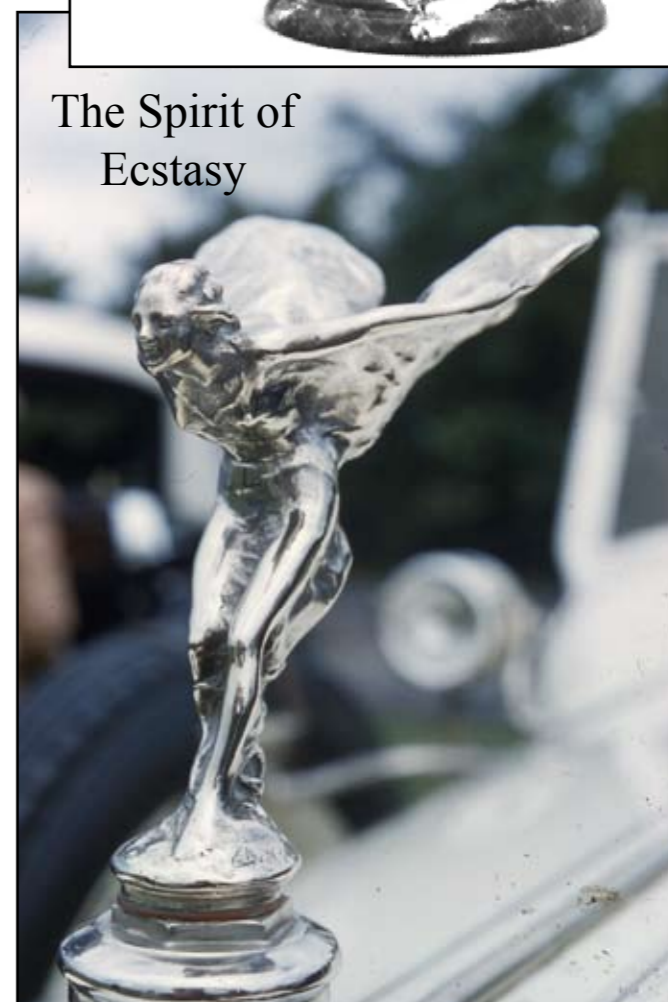
Charles Sykes' artistic skills were used in Montagu's publications, and also by Claude Johnson in R-R Ltd advertising, especially their 'Rolls-Royce Catalogue 1910-1911' promoting the Silver Ghost. This is now a collectors' item, with six Charles Sykes' paintings showing the Silver Ghost in such high society scenes as: Arrival at the Opera... The Country House...The Golf Links...The Meet ...The Covert Side.

Mascots Sculptured by Sykes

The Whisper (or Whisperer) was made by Sykes as a gift for John Montagu. Several copies were made, including a large version. It has been interpreted as a demonstration of the silence of R-R motor cars, or alternatively, as a symbol of the secret romance between Montagu and his secretary, Eleanor Thornton who bore him a daughter.



The Mystery is a real mystery. Although apparently designed as a car mascot, it is far too tall to be practical. Occasional copies appear at auctions and sell for high prices.



The Spirit of Ecstasy is Sykes' most famous creation. It was entered by R-R Ltd in a competition held in Paris in 1920 to find the World's best motor car mascot and won first prize and a suitably inscribed gold medal.

“Is my mascot original?”

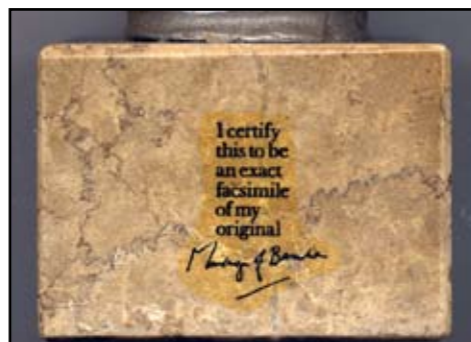
This is the most common question asked by owners. The answer hinges on what one defines as ‘original’. It is obvious that Sykes’ master models are ‘original’. From these he made ‘copies’, usually four. He then used these as ‘masters’ to make agar jelly moulds from which in turn he cast wax patterns to be used to make castings. He then polished these castings and sold them to R-R Ltd to be put on cars. Almost everyone would call these last ‘original’, even though they are copies of copies of Sykes’ ‘original sculpture’.



This is a cabinet in the hallway of Beaulieu Abbey in 1961. Sykes made the middle sculpture as a trophy for the 1903 Gordon Bennett Race. On the left is a Whisper car mascot, now owned by Edward, Lord Montagu. On the right is a large Spirit of Ecstasy. These can be assumed to be ‘original’.



But Edward Montagu made copies of the Whisper in aluminium, mounted on marble, and sold them as “exact facsimiles”. Should we call these ‘originals’ or are they ‘original facsimiles’?



The ‘original’ Whisper (Whisperer) photographed on Edward Montagu’s 82UG in 1957

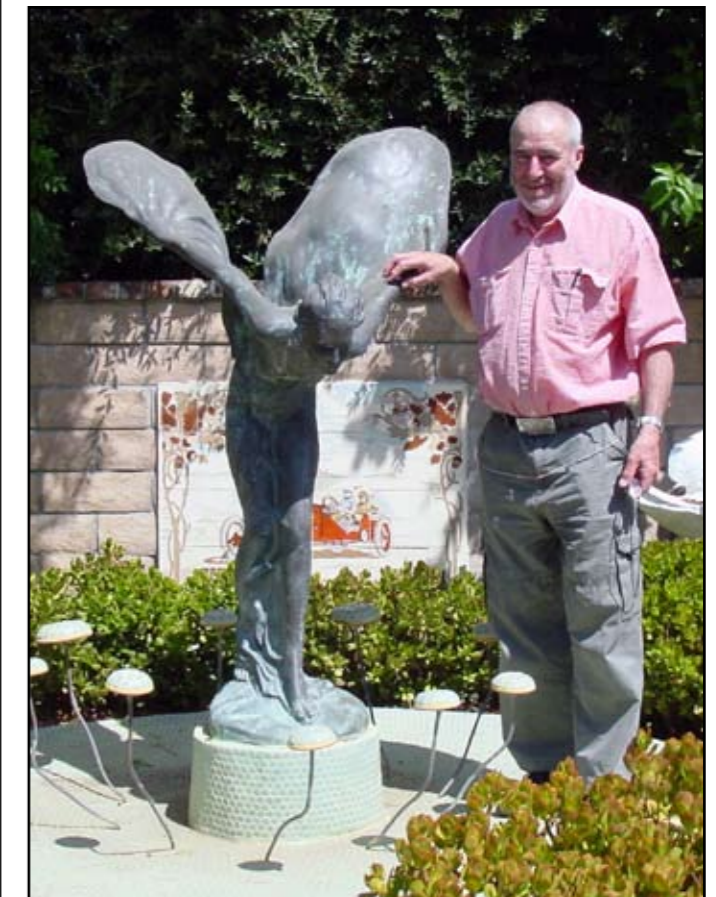
The most iconic of all the Spirits of Ecstasy are the showroom versions, of which there were originally six, 22 inches (560 mm) high, on marble bases, and displayed in R-R showrooms in London, Paris, New York, Madrid, Berlin and possibly Buenos Aires.

This one, on the right, is shown in the R-R Conduit Street London showrooms and is sure to be ‘original’. So, too, must have been those in the other showrooms. But today, there are copies everywhere, many of them of poor quality, and they are certainly NOT original.

Large versions of the Whisper also exist. One was offered by Edward Montagu as a prize in a motoring competition. This is another, in the home of an American enthusiast.



The same enthusiast also purchased a very large Spirit of Ecstasy from a U.S. Rolls-Royce dealership. Should these last two sculptures be called ‘original’? Furthermore, does it matter?



Is it acceptable to put a mascot on your pre 1911 Silver Ghost?

Serious concours entrants go to great lengths to ensure that everything on their car is correct for the car's age. In Silver Ghost circles, if this applied to mascots, cars earlier than 6th February, 1911 should not wear one, because if they did, judges might deduct points. A telling contrary argument might be that the mascot was optional and an owner should be entitled to have one should he or she so choose and may even have chosen to have one retrospectively.



An even more telling argument is that the 1907 40/50 H.P. car with chassis number 60551 (called by the company "Silver Ghost", a name eventually applied to ALL pre-1925 40-50 H.P.s) has, on occasion, worn a 'Spirit of Ecstasy'.

The above picture is taken from Jonathon Harley's 'Silver Ghost, A Supernatural Car'.

The caption reads:

'The Silver Ghost at Loch Leven making the crossing by ferry to avoid the twenty-mile trip round the head of Loch Leven at Kinlochleven to get to the Hotel Ballachulish'.

Furthermore, the very first Silver Ghosts on test after 6th February, 1911 (1527, 1531 or 1532), were eligible for, but did not have mascots ordered for them but John Montagu's 1404, on test 5th September, 1910, did have one. Considering the above, fair-minded folk would say that if you want to fit a Spirit of Ecstasy to your car you can, no matter how old it is. A similar argument could be applied to improvements developed by the Company and retro-fitted to earlier cars.

A similar argument could well be applied to mascots other than the Spirit of Ecstasy.

It was offered as a more appropriate hood adornment than the policemen, golliwogs and black cats that so offended Claude Johnson.

Some owners have mascots special to them for religious, social, occupational, patriotic or sentimental reasons. It would be churlish to criticise the wearing of these mascots.



Saint Christopher, who used to be the patron Saint of Travellers. The Old French quotation is: "REGARD St CHRISTOPHE, PUIS VA-T-EN RASSURE". The translation is 'Look at St. Christopher, and travel with confidence'.



The Scottish Lion is the emblem to use if you have a Scottish ancestor. This 'Lion Rampant' mascot was worn by all Australian vehicles participating in the RREC's June, 1997 Scottish Tour. They were a great success, especially on the parade down Princess Street in Edinburgh.



The kangaroo mascot is a must for Australia Day and Anzac Day, and works well on overseas trips.



This 'Be Prepared' Fleur-de-Lis badge adorned the 1929 20 H.P. GVO40, given to Sir Baden Powell by the Boy Scout Movement at a Jamboree in 1929, and which he named 'Jam Roll', after 'Jamboree' and 'Rolls'.



Tony Dyas, at the time the treasurer of the UK 20-Ghost Club, commissioned David Gillings to sculpt this mascot of an accountant, complete with quill pen.

Or they may be just very impressive!



This South American Condor was given to a member when he retired as CEO of an South American Company.



A three-dimensional version of the flat St Christopher mascot on the previous page. It is very tall.



An angel reminiscent of the Spirit of Ecstasy. Understandable, as it was purchased at an auction of the contents of the Rolls-Royce Conduit Street, London premises.



This eagle would be a superb mascot for an Alpine Eagle Silver Ghost. Its original owner, Lt. Ronald Fife Angas, bought it in Paris while on leave during WW I.

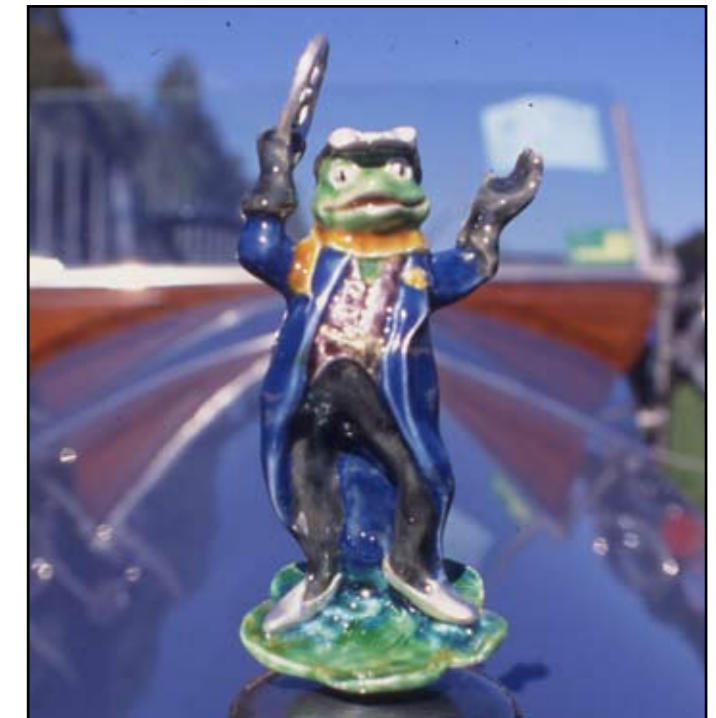
Or They May Be Just For Fun



This 'Casper the Silver Ghost' was a birthday gift to a Silver Ghost owner.



This is a model of the 1931 Supermarine seaplane (powered by a supercharged 36 litre V 12 Rolls-Royce R engine), versions of which won the Schneider Trophy three times in succession thus keeping the trophy in perpetuity. The Supermarine later set a world speed record of more than 400 miles per hour.



Mr Toad, the road-raging Toad of Toad Hall, was a sculpture by Jane Gillings for Jeremy Greene. It was so popular that several copies have since been made.

This one has been enameled by the late Glenice Matthews.



The irrepressible Terry Bruce was famous for his Federal Rally shenanigans. This is his "Spinderial Mandragula" the basis of a ten minute spiel which he concluded by declaring that;

"I don't know what it does, but it does it magnificently". It is, in fact, a device for measuring the efficiency of steam engines.

Post-war cars and their mascots.

Rolls-Royce resumed motor car manufacture shortly after World War II ended but terminated the agreement with Charles Sykes to supply mascots. Thereafter, all mascots were made by the Company. A version of the kneeling mascot was used on the Silver Dawn and Silver Wraith, but the Silver Cloud, Silver Shadow and later mascots were all the standing type and smaller than the smallest of the Sykes mascots. There was some variability in base shape, wing inclination and stance.



a 1957 Silver Cloud,

a 1963 Silver Cloud III,



a 1974 Silver Shadow

a 1978 Silver Shadow II.

“These four examples show the extent to which she could vary from car to car even in the post-war period”

from
Martin Bennett,
Praeclarum
 June 1999
 page 3345

Post-War Cloud and Shadow Mascots



A

B



Rear view of B

Some countries introduced legislation banning car mascots that might damage pedestrians in a collision. The Company then abandoned the use of a fixed bolt attachment (A) and introduced a spring-loaded mascot (B), which was still firmly attached by bolt or chain to the car but which would deflect in an accident. Around 1972 the Company became Rolls-Royce Motors Limited and this was stamped on the rear of the mascot base.

The spring-loaded mascot was superseded by a fully retracting mascot. This was set in the exposed position manually, and retracted when struck lightly. The latest variant can be retracted by the driver at will, or is coupled to the car's ignition switch.



Notice the difference in the radiator cap profile.



The Lady Vanishes!

TOWN OR PARKING CAPS

Unlike the mascot, all pre-1939 Rolls-Royce cars were sold with a radiator cap. Prior to 1911 the cap had a small hexagon top, with the code name 'Knead' and part number S430. After that date the Silver Ghost parts book listed the mascot as E 18328a, with the name 'Cellulose' and its matching cap E 18326, named 'Cellarman'. (There was, in true Rolls-Royce fashion, no E18328). The numbers and names for mascots and caps of later models can be found in the relevant parts books.

The early Knead cap became known as the 'Town' or 'Parking' cap when mascots became available, because the mascot, plus its cap, was often removed to prevent theft.



The original early caps were cupro-nickel. Some were probably German silver. These are a good match for the German silver radiators. Caps not made by R-R are usually brass or bronze and nickel or chrome-plated to match the radiator. These can be identified by a rare earth magnet, which is attracted by the plating but not by cupro-nickel or German silver.



The town and mascot caps have a different hexagon. The town cap hexagon is around 0.375 inches high and 1.0 inch across the flats. The mascot cap hexagon is 0.15 - 0.25 inches high and 1.3 - 1.5 inches across the flats.

Some New Phantom and Phantom II mascot caps have octagons in place of hexagons. The across the flats measurements are nearly the same, 1.4 - 1.5 inches, with the same height. The octagon was probably introduced as it makes a better match to the abutting round base of the larger mascots.



Phantom II compared with a Phantom III

There is a regular progression of diameters of radiator filler spouts. The outside dimensions are 2.0, 2.25, 2.5 and 2.75 inches. 2.0 for Silver Ghost, 20 H.P. and New Phantom. 2.25 for late new Phantom, Phantom II and 20/25. 2.5 for late Phantom II, 25/30/Wraith. 2.75 for Phantom III. All, however, have the same thread size of 16 BSW threads per inch. The size changes may not be exclusive to a particular model. So to avoid misfits, measure the diameter of your radiator filler pipe before you order a cap.



The very earliest type which was only supplied for 1911-14 cars.



The hollow base fits over a modified town cap

The very first mascots were made with a hollow base, which was fitted over a cut-down parking or town cap. This system not only made mascot manufacture difficult, it also required the use of a pipe wrench if the cap was too tight to undo by hand. Thus all except the very early mascots have a flat base abutting a wide hexagon or octagon, on which a suitable open-end spanner can be used.

Some variations of radiator adornments

Rolls-Royce radiators have been adorned by a variety of mascots and devices. A well-known one which excites much comment is the extension used by the R-R team cars in the 1913 Austrian Alpine Trials. Because the bonnets and radiator caps had to be sealed, no oil or water could be added during the trial stages. Rolls-Royce found that in steep descents with a fast-revving engine, water could be lost via the overflow pipes within the radiator. To avoid this, extension pipes were fitted to the overflow pipes to raise the level at which overflow could occur. This required a watertight extension to the usual filler pipe, with the usual filler cap on top. This is one such on an actual Austrian Alpine Trials Silver Ghost. A bracket for attaching the seals can be seen.



Although the R-R Company car AX201 (Chassis No 60551) is shown earlier wearing a Spirit of Ecstasy mascot, it usually wears a Royal Automobile Club badge. Many owners of pre-1911 cars follow this tradition.

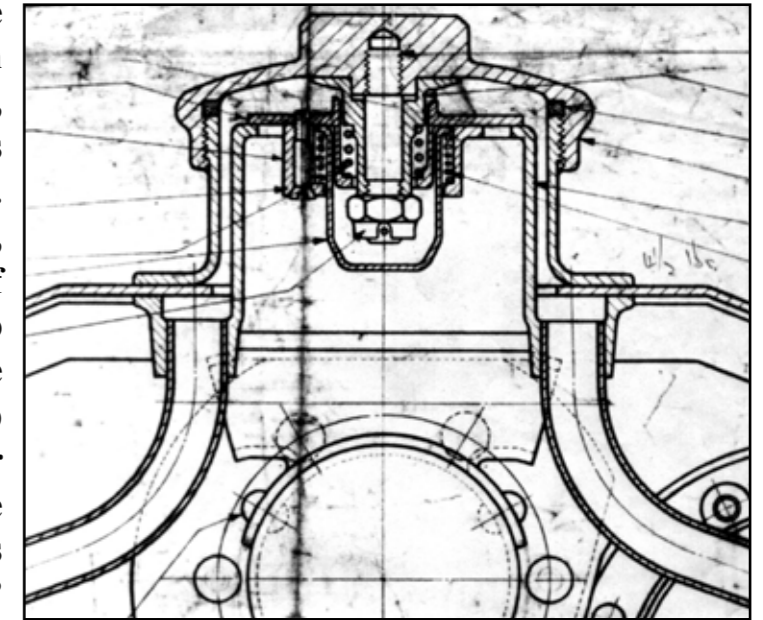


Some practices are best not followed. This is a mascot seen on a Springfield Phantom I, "The Dreamboat" which was denied entrance to an RROC Inc Rally in the late 1950s. The propeller, bug shield and electric light were deemed by the Clerk of the Course to be inappropriate enhancements.



The "Anti-Splash" Device

In the early 1930s, Rolls-Royce introduced the anti-splash device, so-called in the parts books, but usually called, incorrectly, the steam valve. It is used on post-1930 cars which have an external 'dummy' radiator. The radiator cap seals the outside 'filler', and a brass plate seals the top of the 'filler' of the actual radiator underneath. There is no way that a lightly spring-loaded brass plate abutting the face of the actual radiator top will retain steam. All it does is stop water splashing out of the radiator and reaching the overflow pipes outside. But to do this it has twelve components. Why so complicated? The same effect can be achieved with six.



It is a mystery why the company introduced this device. From 1904 to 1930, R-R radiator water was free to flow down the overflow pipes, and no attempt was made to stop 'splash'. After WWII, cooling systems were designed to run 'under pressure', and then the radiator cap actually 'sealed' the radiator, with an inside pressure of a pound or two.



A complicated mechanism with 12 pieces.



A simpler solution which still does the job.



Identifying Pre-war Mascots by Names, Dates, Signatures, Bases & Wings

Numbers on the illustrations refer to those identifying the pictures on pages 5030-5033 of Praeclarum, (See rroc.org.au) or 8501-8504 of The Flying Lady.

If your mascot does not seem to conform to the above information, please remember the mantra re all things Rolls-Royce: "Never say Never, and Never say Always".

RHS

LHS



Early Ghost:
1911-12



Charles Sykes

ROLLS-ROYCE

LIMITED FEB 6th 1911



1912-14?



Charles Sykes

R-R Ltd 6. 2. 11



Later Ghost:
1920-25



Charles Sykes

ROLLS ROYCE Ltd Feb 6th 1911

Mascots made by Charles Sykes or Jo Phillips are always identified by a date (Feb. 6th, 1911 or 6.2.11 or 26.1.34) and a signature (Charles Sykes, or C Sykes). These identifiers will also appear on post-1939 copies of genuine Sykes mascots. There is no particular sequence to the form of date or signature but the full Sykes signature will use the Greek-type 'e' and 's'. Some post-1930 mascots will have a C. Sykes signature in normal upper and lower case lettering and are certainly not an actual Sykes' signature, for the probable reason that he did not sign them, as his daughter Jo Phillips had taken over their manufacture.



20H.P.

ROLLS ROYCE Ltd FEB 6 1911



Charles Sykes



New Phantom

R-R Ltd 6. 2. 11.



Charles Sykes



Phantom II

ROLLS ROYCE Ltd F. 6 1911



Charles Sykes

KNEELING MASCOTS PII, 25/30, Wraith, PIII

The kneeling mascot was introduced on January 26 1934 (Australia Day), probably because owners of sleek, sporty R-Rs wanted a lower profile mascot. The date is scribed on the right hand side of the mascot, and is signed 'C Sykes on the left hand side, with the period being between the arms of the C, and not on the base line.



26.1.34



C-Sykes



Pre-War Kneeling

The Sykes mascot should not be confused with the post-WWII kneeling mascot used by the Company on the Silver Dawn and Silver Wraith. The latter has less artistic and more mechanical in detail and the wings are much wider. Also, because it was not made by Sykes, it has no signature, and thus no 26.1.34 date.



Post-war Dawn



A Company mascot...



...so no writing

All English Mascots Before 1939 (except early SG)

With one exception, all English R-R mascots had, inscribed under the right wing: TRADE MARK REG. and under the left wing: REG. U.S. PAT. OFF. The exception was the very first mascot which has no 'under-wing' inscriptions. The size and orientation of the under-wing lettering varied considerably with different mascots and was hand-scribed. For post WWII mascots, the under wing lettering was stamped.

Some owners may find, under the left wing of their mascot, an additional inscription, the letter 'R' followed by a date, eg: '99. This indicates that it was made by Barrie Gillings in 1999 and identifies it, unequivocally, as a 1999 'Replica' of a Sykes mascot.

Under right wing



TRADE MARK REG.

Under left wing



REG. U.S. PAT. OFF.
(Note "R '99" indicates "Replica")

Springfield: 1921 -1926

The mascots fitted to the U.S.- manufactured Springfield cars were made by the Gorham Silver Company of Providence, Rhode Island, USA. There are two types, the earlier and rarer one, (A), has 'ROLLS-ROYCE' scribed on the right-hand horizontal surface of the plinth or stamped on the front of the vertical surface. The later one, (B), has a sharp edge on the plinth and 'ROLLS-ROYCE' on the right and, on the left, (C) 'REG. U.S. PAT. OFF.' in the spidery type font used by Springfield.



ROLLS-ROYCE

Or



ROLLS-ROYCE



REG. U.S. PAT. OFF.

We repeat: never say "never" and never say "always".

Fingers and Toes



Over the years, some, and sometimes most, of the fine detail of a mascot may have been lost through over-zealous polishing prior to re-plating. The first to go is usually the detail of the fingers, because their direct exposure to the polishing mop, as here, with only two fingers visible.



Very few electroplaters have any concept of the careful polishing needed to preserve detail. In this poor quality replica the detail in the wings and body has been polished off, leaving a smooth surface.



Toes suffer a similar fate. Early mascots had anatomically correct toes. Later ones had simple grooves suggesting toes and even these could be obliterated by over-polishing.



This 1958 photograph is of a mascot owned by Stanley Sears. It was then about 30 years old. Imagine what it could look like after an additional 50 years or so of polishing.

Variations

Several authorities insist that the 20 H.P. mascots were of two types, with either the cylindrical 'small cheese' or 'large cheese' base (both below to the same scale).



Each has 'Rolls-Royce Ltd Feb.6th 1911' on the base. The small cheese is signed C Sykes, with a fullstop and the large, Charles Sykes. Later 20 H.P. mascots have rounded bases, and may be signed R-R Ltd 6.2.11 and C Sykes. So: "Never say Never, and Never say Always"

Some Suspect examples



This mascot is not signed or dated and is almost certainly NOT a Sykes mascot, even though it might look very clean and detailed as this one does. It also has a base which is clearly modelled on an early mascot.



This mascot is very detailed and is similar to a genuine New Phantom Sykes mascot. But it has no signature or date. It looks fine, but is not a Sykes mascot.



This mascot is almost certainly a copy of the previous mascot and has excellent detail but is a zinc injection moulding, with the parting lines of the five-part mould clearly visible. It was purchased at a market stall in Malaysia for \$5. At this price, it can be left on the car without worrying about theft.

What Are Caps & Mascots Made of ?

Metals, casting and production

The metals used in casting the mascot were ~~nickel~~^{white metal} at one time & bronze also. Some bronze ones were given a brass finish or copper finish to match the fittings, & the nickel ones were silver plated. Later on all were cast in bronze & plated. The ideal mixture was 85% copper 7 1/2% zinc 7 1/2% tin

Authorities have various opinions about the metals used in Sykes mascots. It is clear that many of the early ones were cast in German silver or alloys of a similar appearance, and were silver-plated. The silver-plating has by now been almost completely removed by assiduous polishing.

For a probable explanation of the alloys used, I rely on Jo Phillips who took over mascot manufacture from 1928 to 1939.

Extracts from Jo Sykes' notes for her lecture to the RREC on 1/12/1959

Jo sent me these notes for her lecture on the mascot to the Rolls-Royce Enthusiasts' Club. Copies of the notes have been sent to the Sir Henry Royce Foundations in the UK and Australia for their archives. A CD of her lecture is available from RREC's Hunt House in the UK.

When chromium plating was introduced we ran up against a number of difficulties - It was found that 90% copper 10% zinc alloy was more suited to the chromium as the presence of tin caused the chromium to blister. This mixture made casting difficult of course because it did not flow so well. Nickel plating is first put on the bronze & then the chromium (at least it was then, before 1938) The method may now be different. This double plating & the great amount of buffing & polishing tended to disguise the fine details of fingers & toes & features & as we were very proud of these details we used to complain a great deal & reject mascots if they did not

Alloys

Various alloys have been used to make mascots and caps. Mascots are always castings, but caps can also be machined from solid bar. Early radiator caps were cupro-nickel (90% copper, 10% nickel). The alloy formulations specified by Jo Phillips in her lecture notes should be considered approximate. The German silver, white metal and bronze alloys used in foundries have a bewildering variety of formulations.

Bronze is an alloy of: copper 90% - 60% and tin 33% - 10%, perhaps with other additions.

German silver is an alloy of: copper 60% -45%, zinc 32% - 50% and nickel 22% - 6% but no silver.

White metal is an alloy of: tin 89% -80%, lead and/or copper 6% - 1% and antimony 20% -12%.

Brass is an alloy of: copper 90% - 60%, zinc 40% - 10% and other:- aluminium, manganese, phosphorus etc. 10% - 1%.

The book Brassfounders' Alloys (E&FN Spon Ltd, Haymarket, London, 1918), lists 199 different casting alloy formulations and your mascot could be made of any one of them!

If your mascot has lost plating anywhere and the underlying metal matches your pre-1930 radiator, it is probably German silver or a white metal or white bronze formulation but this is not an infallible indicator of a genuine Sykes mascot.

R-R Ltd probably fitted the bolts to the mascots and made all the radiator caps.

Sterling silver mascots or gold mascots have been supplied on request. The latter is usually plated.



Glass



Gold (Plated)



Or Butter

HOW ARE THE MASCOTS MADE?

The Sykes made mascots using the ancient 'lost wax' process. A wax pattern is encased in heat-resisting mould material and heated to melt out the wax. Molten metal is then poured in and when cool, the mould is chipped away from the 'casting', which is then smoothed and polished.

The steps are:



1. A sprue is attached to the bottom of the mascot. A large hole is cut in the base of a tapered container.



2. The container is sealed to a base and the mascot is then bolted inside the container.



3. Heated hydrocolloid, (a liquid which becomes a flexible solid when cooled) is then poured into the container, and allowed to cool.



4. The mascot is unbolted from the base and the now solid hydrocolloid removed without damage because the container is tapered.



5. A narrow blade is used to make incisions in places which allow sections of the jelly to be removed from the mascot without damage.



6. The sections are then re-assembled in the tapered container. They fit exactly. The container is re-sealed to the base and melted wax poured into the mould.

The cooled and solid wax pattern is an exact copy of the original mascot, but a little smaller because of wax shrinkage.



The wax pattern may have fins or irregularities (left) These are removed and the surface smoothed (centre). The pattern is invested in the heat resisting mould material and the mascot cast, as described above.

The 'sprue' projecting from the base of the casting is removed, the mascot base flattened and a mounting bolt fitted. A special jig (this one made by Lyel Murrell) is required to ensure that the bolt is centred and at right angles to the base. Before 1940, mascot mounting bolts are always brass or copper, and have 5/16" or 3/8" BSF threads.



Post-WWII mascot mounting bolts are not in contact with radiator water, and may be steel. When motoring legislation required movable or retractable mascots, the flat base was replaced by two tapered lugs holding a pin securing a spring-loaded chain or bolt in a mounting tube or, later, by a totally retracting mechanism.

The two-lug system appears to be machined out of a solid base extension, and unlikely to be copied by people who make replacement mascots.

The mascots can then be plated. Generally speaking, it is nickel for pre-1930 and chrome post-1930.

Rolls-Royce Casting Techniques

Post-WWII mascots are all made by R-R Ltd.

Sand Casting at Crewe

In their first technique, the wax patterns were sprued onto a thick carrier bar with a large, thick sprue to ensure adequate filling of the mould cavity.



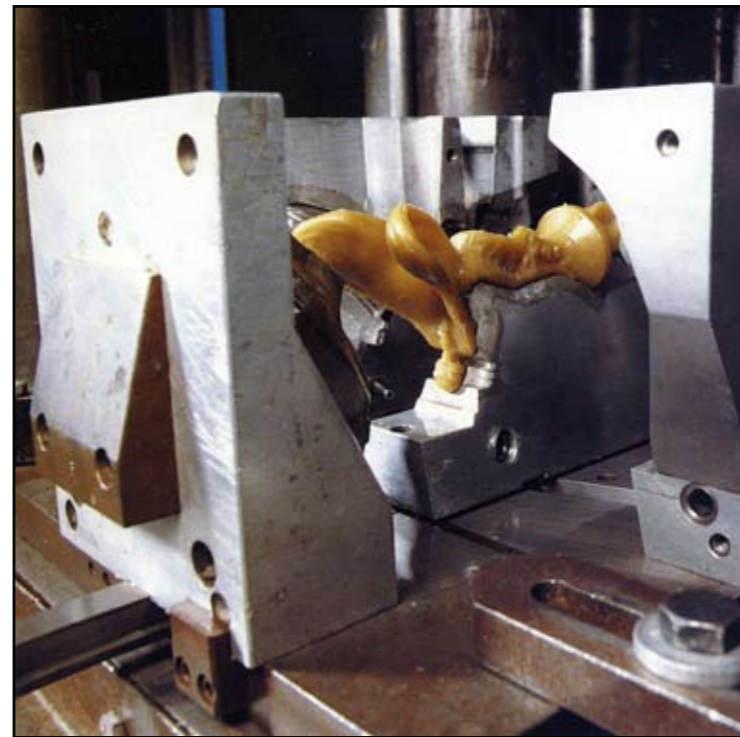
The investing material here is fine moulding sand, or perhaps R-R's own special formula for mould and metal. The square blocks at the rear are yet to be devested. The three mascots have been cleaned of moulding material and are ready for polishing.



The company now makes precision castings using a shell-moulding technique.

The sequence, from left to right, is:

1. wax pattern
2. coating of fine investment (in several layers) and baked hard.
3. the finished casting with investment removed.
4. the finished casting after cleaning, polishing and final tumble-polishing with fine polishing powders and ground corn-on-the-cob.



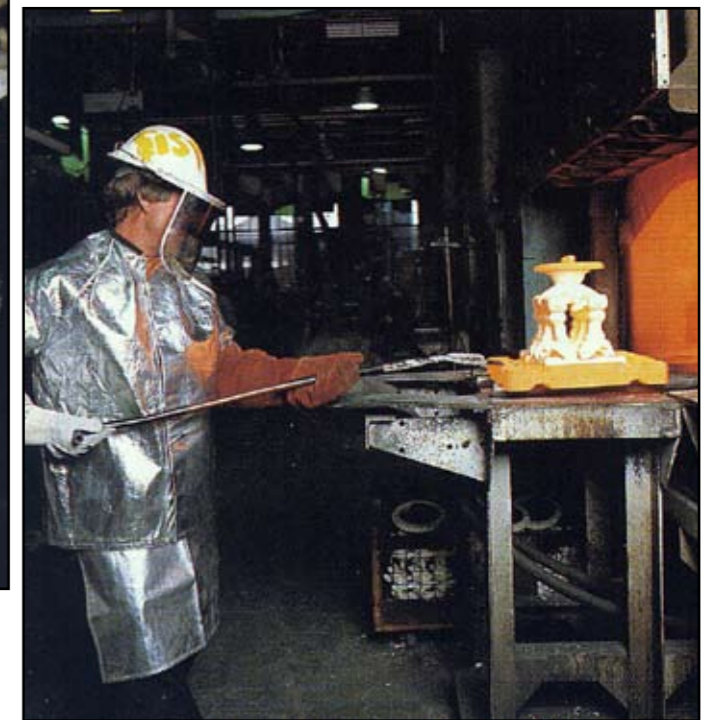
The hydrocolloid moulds used by the Sykes (and generally once only) have been replaced by a multi-part die into which the pattern wax is injected, allowed to cool for several minutes, then removed.



The assembly is then rotated slowly in a thick slurry of fused silicate, which provides a fine surface, free of bubbles. It is removed from the slurry, then immersed in a fluidised bed of fine moulding sand, which coats the patterns with a thick layer of strong and heat-resisting ceramic. This is pre-fired in high temperature steam to fuse it and melt out the wax.



The wax patterns are then melted onto a carrier bar, five at a time, and two bars fitted with a very thick sprue.



The mould is then fired at a high temperature and the molten mascot alloy poured into the mould cavity. Polishing and finishing are described above.

EPILOGUE

Speech by Justy Phillips (great grand-daughter of Charles Sykes), on the occasion of the presentation Dinner, 53rd Federal Rally, Rolls-Royce Owners' Club of Australia Centenary of the Spirit of Ecstasy Rally, Canberra

I would like to extend my deepest thanks to everyone here for the warm welcome you have shown me and my partner this weekend. It is an absolute pleasure, surprise and honour to be here.

I would like to thank Ian and Ida Irwin and the committee and members of the Rolls-Royce Owners Club of Australia for the invitation. In particular I would like to thank Associate Professor Barrie Gillings for discovering me. To some of you, I must seem like a genie just popped out of a lamp but it was hearing Barrie speak on Radio National last year that prompted me to make contact and reveal to him my secret whereabouts in Wagga Wagga.

My father Bart Phillips is the grandson of Charles Sykes. I have spoken this week to Bart and to my brother Ben, who are both in England and they were both thrilled at the invitation for me to attend this centenary event.

If you would permit me to say just a few words about my memories of my granny Jo:

Jo was the only child of Charles and Jessica Sykes. I knew her as granny Jo, a very small, grey-haired, highly principled artist in her seventies. She lived then in a small village called Alston in rural Cumbria in the north of England. To others Jo may have appeared eccentric but I understood from a very early age that she was truly avant garde. Jo was a committed vegetarian and she was hugely aware of the impact of humans on the natural environment. She understood more about climate change and energy use then than anyone ever spoke about. Jo took her young sons to protest alongside her on the anti-nuclear marches at Aldermaston.

She had no electrical items in the house – no fridge, television, radio, or vacuum cleaner. In fact, as children we used to love going back to school after the break to tell stories of holidays without a TV and a cheese-smelling cupboard called a pantry!

Above all Jo was an artist. She painted and sculpted every day and also managed to squeeze in a 3 mile walk to her local pub each day for her half-pint of stout.

I am also an artist and the 3rd generation of my family to attend the Royal College of Art in London; Charles Sykes, then my father Bart and then me. As many of you know, Jo Sykes attended the Royal Academy in London at the age of 19.

My brother Ben is an actor and has his own physical theatre company in Liverpool, England.

I remember Jo telling the story of a procession of Silver Ghosts coming up the driveway in Alston to collect a donation of mascots or moulds she made to the Bealieu Motor Museum. My own tenuous link with Lord Montagu came in the form of a generous contribution in 1989 that inspired my future wanderlust. When I was 14, I was raising money to join an adventure trip to Bolivia. I tried to hit Granny Jo up for some cash and she responded by kindly writing to Lord Montagu.

A lovely letter and cheque arrived, which I no doubt spent on all those pan pipes and knitted ponchos I brought home.

I would like to finish by saying that Charles Sykes is not only here in spirit but also in body – a very handsome bronze self-portrait which was passed on to me by my mother Carol.

Once again, I'd like to thank everyone here tonight for your warm hospitality and generosity in welcoming us to this prestigious event.

Sunday 10th April, 2011



Rally director Ian Irwin invited Justy and her partner Margaret Woodward, both talented artists, to attend the Saturday and Sunday formal dinners. Here Ian is showing Justy Phillips his almost fully-restored Silver Ghost chassis number 1404. This car was the first R-R ever to wear a mascot. David Berthon is recording the occasion for posterity.



Justy Phillips' attendance at the 'Centenary of the Spirit of Ecstasy Rally' happened because she heard Barrie Gillings talking about mascots on ABC radio and e-mailed him seeking photographs of her great grandfather, Charles Sykes and grandmother, Jo Phillips. She was invited to attend his mascot lecture, but had a prior engagement. However, she attended the concours and is here discussing the Gillings mascot collection.

Justy has never owned a Spirit of Ecstasy. This deficiency was corrected at a function organised by David Berthon for the 20-Ghost Club, where she was presented with a replica Spirit of Ecstasy.



It was fitting that Justy presented the overall Concours Winner award to Frank Kuulkers. (L-R Ian Irwin, Justy Phillips, Frank Kuulkers, Margaret Woodward.)



The Spirit Lives On !

