# R News

*by R Core Team*

## CHANGES IN R 3.6.1

### INSTALLATION on a UNIX-ALIKE

- The default detection of the shell variable 'libNN' is overridden for derivatives of Debian Linux, some of which have started to have a '/usr/lib64' directory. (E.g. Ubuntu 19.04.) As before, it can be specified in 'config.site'.

### UTILITIES

- `R CMD` knows the values of AR and RANLIB, often set for LTO builds.

### BUG FIXES

- On Windows, GUI package installation via menuInstallPkgs() works again, thanks to Len Weil's and Duncan Murdoch's PR#17556.

- `quasi(*, variance = list(..))` now works more efficiently, and should work in all cases fixing PR#17560. Further, `quasi(var = mu(1-mu))` and `quasi(var = "mu $\hat{3}$")` now work, and `quasi(variance = "log(mu)")` now gives a correct error message.

- Creation of lazy loading database during package installation is again robust to 'Rprofile' changing the current working directory (PR#17559).

- `boxplot(y   f, horizontal=TRUE)` now produces correct x- and y-labels.

- `rbind.data.frame()` allows to keep '<NA>' levels from factor columns (PR#17562) via new option factor.exclude.

  Additionally, it works in one more case with matrix-columns which had been reported on 2017-01-16 by Krzysztof Banas.

- Correct messaging in C++ pragma checks in tools code for `R CMD  check`, fixing PR#17566 thanks to Xavier Robin.

- print()ing and auto-printing no longer differs for functions with a user defined print.function, thanks to Bill Dunlap's report.

- On Windows, 'writeClipboard(.., format = <n>)' now does correctly pass format to the underlying C code, thanks to a bug report (with patch) by Jenny Bryan.

- `as.data.frame()` treats 1D arrays the same as vectors, PR#17570.

- Improvements in smoothEnds(x,*) working with NAs (towards runmed() working in that case, in the next version of R).

- `vcov(glm(<quasi>), dispersion = *)` works correctly again, fixing PR#17571 thanks to Pavel Krivitsky.

- `R CMD INSTALL` of binary packages on Windows now works also with per-directory locking.

- `R CMD INSTALL` and `install.packages()` on Windows are now more robust against a locked file in an earlier installation of the package to be installed. The default value of option install.lock on Windows has been changed to TRUE.

- On Unix alikes (when readline is active), only expand tilde '( )' file names starting with a tilde, instead of almost all tildes.

## OTHER RECENT SIGNIFICANT CHANGES IN R

There were two important, user-visible changes in version 3.6.0:

- Serialization format version 3 becomes the default for serialization and saving of the workspace (`save()`, `serialize()`, `saveRDS()`, `compiler::cmpfile()`). Serialized data in format 3 cannot be read by versions of R prior to version 3.5.0. Serialization format version 2 is still supported and can be selected by version = 2 in the save/serialization functions. The default can be changed back for the whole R session by setting environment variables R_DEFAULT_SAVE_VERSION and R_DEFAULT_SERIALIZE_VERSION to 2. For maximal back-compatibility, files 'vignette.rds' and 'partial.rdb' generated by R CMD build are in serialization format version 2, and resave by default produces files in serialization format version 2 (unless the original is already in format version 3).

- The default method for generating from a discrete uniform distribution (used in `sample()`, for instance) has been changed. This addresses the fact, pointed out by Ottoboni and Stark, that the previous method made `sample()` noticeably non-uniform on large populations. See PR#17494 for a discussion. The previous method can be requested using `RNGkind()` or `RNGversion()` if necessary for reproduction of old results. Thanks to Duncan Murdoch for contributing the patch and Gabe Becker for further assistance.

  The output of `RNGkind()` has been changed to also return the kind used by `sample()`.